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ORIGINAL ARTICLES.

STATE MEDICINE.[1]

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The views expressed in this paper will be found ultra in the extreme, but as I have given over ten years earnest study to the subject of State Medicine, not only in books, but practically in other countries than our own, and as they are the result of such study and honest conviction, I trust they will receive the attention which the subject at least deserves.

The careful student of the medical institutions of the United States must most certainly admit that there is much to be desired, and much rottenness to be rooted out before they can become what they should be, and worthy of so wealthy a country and so energetic and practical a people. But in speaking of the "Medical Institutions" of a country it must not be thought that the Schools alone are to be the subject of consideration. *They* form one unit among many, but unfortunately for many schools, as well as for the people and the nation, it is the most important and fundamental unit in the whole organism. If the foundation be weak, the whole superstructure must be in a like condition.

Before entering upon the discussion of this, the educational part of our question, it is necessary that we come to a clear understanding of what we mean by the "Medical Institutions" of a country. To this end it is necessary that we define our ideas of medical science. The ultimate endeavor, or purpose, of medical science, as we understand it to-day, is not to educate *practitioners in medicine, i.e.*, to make "Doctors," alone, but rather to subject all disease to the most searching intellectual, physical, chemical, macro- and microscopical analysis possible, in the hope that we may thus be enabled to discover, not only the *nature of a given disease*, but also the *nature of its cause;* for all diseases have their internal, organismal or predisposing causes, as well as external or exciting causes; in order that we may elucidate means by which *to prevent the generation of such diseases* so far as possible in the future. Up to the present time our endeavors in this direction have been almost entirely limited to diseases of an infectious or contagious nature.

[1]Read in the Section on State Medicine at the Thirty-Sixth Annual Meeting of the American Medical Association.

Our work in the future must also include the so-called "sporadic," or as I would term them, common, diseases of animal life; the chief cause of which is to be sought in the utter ignorance of humanity of the laws of life. The "Bacillus of Ignorance" plays a much greater rôle in the causation of disease than that of phthisis, cholera, or septicæmia, will be fully as difficult of exposure, and much more difficult to combat. The world needs an applied physiology suitable to the intelligence of the educated and thinking masses, as much as it does for the medical student.

While Prevention is the Alpha and Omega of our endeavors, it is not always of possible attainment; so that the world demands the practitioner to treat its diseases, or accidents, as well as the investigator to search into their nature and causes, and to make experiments as to their treatment. The individual man naturally looks upon the practitioner as the most important of the two, because it is with him alone that he comes in immediate contact. For the mass, however, and by that we mean the nation as a whole, the investigator is of far greater importance, though ignorance still so rules the world that none but the exceptionally educated have as yet recognized the value of this fact. The practitioner needs to learn that even he would be at an intellectual standstill were it not for the men in the laboratories whom he so often styles "the theoretical and impractical men of his profession."

The medical institutions of a country are:

1st. The Schools.

2d. The Boards of Health, or its Preventive Force.

3d. The Practitioners.

The Science of Medicine is the great *Life-saving Service of the World.* The medical institutions of this country should be as much a part of its "Life Saving Service" as that brave body of men that has been organized along our sea-board and lake-coasts during the past ten years. Every intelligent person must admit that if the medical institutions of this country should be a part of its "Life Saving Service," and in reality almost the whole of it, that they should also be organized and regulated in the same manner as any other branch of the public service. The division of this service has already been stated, but such a classification has also another practical value.

This service has been divided as follows:

1st. The Educational Part.

2d. The entire Hygienic Organization.

These two departments must be entirely regulated and supported by the State.

3d. The Practical Part, which must be controlled by the State, as it is subject to the Hygienic Department, but receives its remuneration directly from the individual receiving its services.

The Medical Schools are the foundation of this entire service. It has already been said that "if the foundation is weak the entire organization must be of the same character." To the Schools we have to look as the nurseries out of which we are to draw our supplies for all parts of this extended and complicated branch of the Public Service. What then is the work of the Schools?

I. The education of scientists capable of teaching others so that they may follow in their paths and become able and enthusiastic Investigators into the nature of disease, and everything having an etiological connection therewith.

II. The education of Practitioners in the principles which have resulted from such scientific researches, as well as the practical experiences of the world.

Do our schools fulfil these conditions? Emphatically, *No!* If we make a careful survey of the literature of original research, we shall be made aware of the fact that the medical schools of the United States are conspicuous by the almost total absence of recognized contributions to this important field of preventive medicine.

Practitioners are, and have been, well educated at some of these schools, but the fundamentals upon which teaching depends are nearly all borrowed from Continental authors; the practical side is largely American, and if due regard be given to what our European confrères are doing, leaves nothing to be desired in that direction.

Why is it that our schools do not fulfil all the demands that we have to make upon them?

1. Because there is not a single medical school in this country that is *properly supported and regulated by the State.*

2. Because there is not a medical school in which all the teachers have been selected for their abilities, not only to *teach well, but to investigate better.*

3. Because there are no schools offering free opportunities to men of distinguished ability to work and teach as "private docents," thereby giving genius a chance for self-support, and enthusiasm an opportunity to extend over the land.

4. Because we have no school where education is free, where the one purpose is to fulfil its whole duty as a *branch of the public service.*

These ends can only be attained by a National Institute of Medical Sciences, supported and regulated by the Government through a well-selected National Board of Health.[1] To this should be added a department of Comparative Medicine and Vegetable Physiology and Pathology.

Endowed schools can never meet these requirements. All such schools are private, in that they form no part of the Public Service of the State. They can never, to eternity, shake off the evil influences which they have inherited from their inception. Speculative schools will not even let science enter their doors, save as they must in the form of honeyed misrepresentations to attract the students flying round after cheap and easily-obtained diplomas. Up to the present time every medical school that has been established in the United States has been for the sole purpose of making practitioners. The majority of those that I have classed as "Endowed" *are honest schools*, and were established in the earlier days of their respective States to meet a public necessity. The country was young then, almost the entire population being busied in developing it. Drones and sick people were a luxury the earlier settlers could not afford to have with them. The first they drove out, and they desired the sickness driven out of the others. The intelligence of the country has not augmented in any proportion to its increase in wealth and population. It still fails to grasp the mission of medical science in the world, and to realize that its executive institutions should be a part of the Public Service of the State. It does not realize that research is the foundation of all knowledge, or that "*Knowledge is*—the—*Power*" by which alone we are enabled to prevent the ravages of disease. It still demands *curers* only.

If we are called before a committee of one of our legislative bodies with regard to any disease that is making itself unpleasantly frequent, they ask us, "What can you do to cure it?" not what is its nature; and if we speak of research into its nature, and the necessity of money and time to make investigations with the hope of preventing it, they immediately put us down as a "crank."

The other class of schools, the speculative (to which should be added a new variety, lately imported, of veterinary schools, that run their hospitals upon a "subscription" basis), although incorporated, are only to be condemned. They are the result of unscrupulous greed on the part of selfish and ambitious men, who desire to increase their influence and incomes—at any cost to the profession—by being thus enabled to pose as "the learned Professor" before an unreflecting public, as well as from the fees of students for whom they feel no responsibility either with regard to the quantity or quality of education given them; and on the other hand, of the action of ignorant, irresponsible and unthinking legislators that are willing to charter anything. In their endeavors to get students—and the faculties of these speculative schools have very capacious maws—they send the most astonishing catalogues broadcast over the land, in which they state their advantages one over the other. These illustrated pamphlets remind one very strongly of the advertisements of summer hotels and boarding houses. The buildings and surroundings are very imposing—upon paper—and there is very great similarity in the characters of the proprietors.

In the one case they care nothing about the intellectual food which their patrons receive, as in the other with regard to the bodily, they are both alike in demanding prompt and full payment.

In 1876 we had some sixty, while in 1885 we are

[1] The time has come when we should agree to make Washington the Central Light of America in Medicine.

credited with having 134[1] medical schools in the United States. In some States there are as many as eight of these institutions and in at least one of our cities there is the same number. The majority of these schools are of the speculative variety. As they are in no sense of the word of public service, there is no valid reason for their existence. No branch of the public service should have even the suspicion of speculation hovering over it, though all parts of this service should be conducted after the the most rigid and exact business principles. What do we mean by "business principles" with reference to medical schools? The returns which the people have a right to expect are the same as in any other branch of the Public Service: *Absolute devotion to the duties of the State.*

In this Public Health Service, especially its educational part, only the enthusiast is fitted for the work. This spirit can never result from our present medical school system.

It is said that "there are no classes in America." This is not true; we have every class of worthy and unworthy society save the most important one of all to the continued development of the country, the preservation of the Public Health and increase of the Public Wealth—the Scientific class. We must have a class of original investigators in the service of the Government as teachers also, who, like the army, are paid by the Government, and subject to pension on retirement. Un-American or not, in the face of the ignorance of the land, I say, we must adopt this system before we can be called an enlightened nation. This class forms the sappers and miners who prepare the way and make possible the success of every other class in the world. Without this class of what worth is the accumulated wealth of the world when disease threatens? In the face of cholera the millionaire for once bows in proper humility to knowledge; the practitioner for the nonce loses some of his self-conceit, and the world looks at the work of the investigator. The people cease to cry for "cure-alls," but rather demand that the pest be prevented from landing on our shores. Science is the continued search after new facts, and the truth. Without science the world would finally come to a standstill, and riches be valueless; they would simply consume themselves. Science is the equalizer which makes possible new endeavor, and by her discoveries revolutionizing business frequently breaks the back of monopolies, giving new courses to wealth.

Let us look at some of the evil results of our medical school system:

I. Not being scientific, *i.e.*, investigating, schools, they have exerted but little influence towards the advancement of medicine in the country.

a. The reason for this is:

1st. Not being State schools, they have constantly to struggle for existence, which gives

2d, Lack of funds.

This condition has been rendered still worse by the idiotic chartering of speculative, opposition, or special schools of medicine in numerous States and cities, so that the income from students' fees has been rendered unnecessarily small.

b. The endowed schools have, for this reason, been obliged to depend upon men as teachers in the fundamental branches of medical education who had had no especial fitness for the work, *except that they were born rich, and that some relative had been one of the original founders of the school.*

c. These two conditions—poverty and nepotism—have exerted a most unfortunate influence in limiting the freedom of the trustees in their selection of teachers and preventing them from seeking genius wherever they could find it.

They are not permitted to buy their goods in an open market, but like the American ship-owner, must take what he can get, "cheap and nasty" or not, as the Germans said of their Centennial exhibit in this country.

II. The great number of these medical schools, and the fact that the majority of them are speculative, tends to lowering the standard of education, and to the production of an utter want of uniformity in the quantity and quality of education acquired by graduates from different schools either in the same or different States, or what is more disgraceful, in the same city.

III. This evil condition of things has resulted in bringing unnecessary disgrace upon an honorable profession, and of lowering the appreciation of the same in the public mind. More incompetent than really trustworthy practitioners have thus been enabled to represent themselves as "M. D.'s" or "Doctors."

IV. So little appreciation have the people of the majority of the States of the value of thorough education in medicine, that it has thus far been impossible to find intelligence enough in their representatives to *regulate the practice of medicine* in order to protect the public and reward honest endeavor by passing a law to prevent charlatans from using the title "Doctor" as a manner of deception.

Medicine being a part of the Public Service, it should be regulated by the State. If one introduces the questions herein brought to discussion to the attention of the most intelligent of our teachers, or practitioners, he is invariably met with this answer: "*Yes; these things are all too true, but how are they to be obviated? You must remember that we are but a young country yet.*" I may be mistaken, or perhaps over-conceited, but I think I have given more thoroughly honest and sceptical study than any one in this country for the reasons: 1. That I desired to have all these evils avoided with regard to veterinary schools; 2. That it is my present ambition to do my part towards out-rooting these evils from all medical teaching in the United States.

The causes of these unfortunate conditions are not to be sought in the youthfulness of the United States in comparison with other nations, for it must be remembered that the settlers and immigrants to this country brought and bring with them the average intelligence of their native lands; but to two other circumstances, and nothing else: 1st. Our English inheritances. 2d. That we have a repre-

[1] Boston Herald.

sentative form of government—*i.e.*, are a Republic—which does not represent the acme of intelligence in the country by any means.

Our English Inheritances.—There has been, or is, no better appreciation of the true relation of medical science to the public in Great Britain than America. There is no such thing as organized State Medicine in Great Britain or in any of her dependencies. There, as here, all the medical schools are either endowed, or chartered speculative institutions. There, as here, you can find the only veterinary schools in the world that are conducted on the "subscription plan," regardless of every principle of professional honor. They are all "Doctor" makers, nothing more. The government assumes no responsibility as to how the instruction is being given or the examinations conducted in the British medical schools. There is scarcely any organized research at the schools; the British government is opposed to it. It believes in upholding ignorance and putting restrictions upon knowledge. It does not support "Preventive Medicine." It places itself on the side of ignorance, prejudice and sentimental gush—a Holy British Trinity—by enacting a law against the intelligent use of vivisection. It drives such men as Lister to the Continent to gain knowledge by which human life is to be spared and disease prevented by this senseless law. The British government is an improvement on ours in some respects, in that if it does not regulate the medical schools, it has allowed the respective professions to select their own examining and diploma granting bodies, and by prohibiting to charlatanry the use of titles belonging to the regular graduate has shown that it has some regard for honesty and its duty to the public. Great Britain has neither a well organized Public Health or Veterinary Police Service. All this ignorance our ancestors brought with them, and we have not improved an iota since that day; in fact, we are far behind Britain yet; for she does not protect, cherish and nourish the pestiferous diploma mills which disgrace many of the States of this Union.

The absurd degree to which we have nationalized the idea of the "rights of the British freeman," or individual citizen, and failed to appreciate the fact that all such rights at once cease when they cause injury to another, or to the masses, finds its expression in our doctrine of "State rights," and in the senseless opposition to all laws having relation to questions of public health, animal diseases, or for regulating the practice of medicine. We do not yet know, either as a people or as governments, the meaning of either of these terms. In the United States, the people of which boast so much about their prosperity and intelligence, there is scarcely any such thing as State Medicine. No efficient Boards of Health; no trustworthy milk inspection; no inspection of dairies in order to guarantee to the public that the milk they consume or feed their babes upon is not drawn directly from ill-fed and housed cattle, or from cows diseased with garget, or what is far worse, tuberculosis; no thorough meat or market inspection. Not a State in this Union gathers reliable statistics upon these vital questions. Our Boards of Health are a farce; composed of men the majority of whom have more knowledge of "ward politics" than of their technical duties. Not one of the States has a suitable laboratory at its disposal wherein investigations and experiments can be constantly made.

The question of questions is: Why are these conditions peculiarly characteristic of English speaking countries? It is an axiomatic fact that the more "English" a people are the more inefficient their government upon all questions of the kind we are considering. Another fact of like nature has long since made itself evident to every careful student of the industrial sciences: That original research has prospered and at present flourishes among the great civilized nations of the world in a direct ratio to the non-republican character of their governments. In other words, the history of Republicanism gives direct evidence that thus far it has been utterly unequal to the appreciation of the great cardinal principle of national prosperity, that "*Public Health is Public Wealth;*" that this condition cannot be attained, or maintained, without the careful regulation of the medical institutions of a country as a part of the Public Service; that the entire system is embraced under the term of State Medicine. From these standpoints every Republic and every extremely liberal government has been a failure.

Again, wherever we see science flourishing, and original research flourishing under a republican banner, as at present in France, it is not due to republican statesmanship, but rather that the Republic has inherited, and had sense enough to retain, or indolence enough to let alone, the good of the monarchical institutions which in other ways it superseded. Monarchical France made possible the work of Bichat, Cruveilhier, Laënnec, Dupuytren, Magendie, Claud Bernard, Pasteur, Chauveaux, Toussaint and others; and monarchical Germany has given opportunity to Mueller, Helmholz, Du Bois-Reymond, Ludwig, Webber, Rokitansky (of Vienna), Gegenbauer, Virchow, Koch, Gerlach, Bollinger, and so many others that the world can never pay the debt that it owes such governments for appreciating the fact that the world owes such men a living, and giving it to them, so that they have been enabled to devote their lives to its service.

Put Britain and America upon the stand, and question the Hand that records the immortal deeds of the men of medical science: *How much have you done to support original research?* We turn over the book in vain; the leaves devoted to the American and British governments are—blank. Perhaps it is thought that I am in favor of a monarchical form of government? Of that there is no danger; but here we are faced by conditions necessary for the well-being of every nation, and by the singular phenomenon that thus far in the history of the world wise legislation has not been adopted by or flourished under the banners of liberal governments. Everything that is of public importance is of a political nature, and not one deserves a higher, more disinterested, or non-partisan statesmanship than the question of Public Health. All questions with reference to the medical institutions of a country bear so

intimately upon its prosperity that all wise thinking men who neglect them, or who would leave them to the consideration of the ordinary lay-politician, are false to their duties.

The question then left for us to consider is: Why is it that original research in medicine has prospered under energetic monarchical governments, and public health organizations found their most complete development, and not under liberal governments?

The answer is: In governments "of the people, by the people, for the people," the masses never think of anything outside of their daily routine life: they follow in the ruts already made for them, and leave the interests of the country entirely in the hands of party leaders who make a business of politics and not a science of statesmanship. Only when the political affairs of a country become pathological,—that is, the life of the body politic is threatened, does the the average citizen,—the intelligent masses—awaken from his political self-complacency and place his intellectual horoscope beyond the party ruts and take any active interest in the welfare of the public of which he is a member. Pathological politics leads to the development of the mugwump, and to true statesmanship. If the pathological conditions threaten the vitality of the ordinary citizen's pockets he awakes to the danger much quicker than when only his health is endangered, and even less quickly when the danger is of a general and not local nature. So long as the cholera is in Europe and business prospers in this country, the American citizen scarcely thinks it of any account.

The American Government takes no part in the etiological researches of the world. It offers $25,000 as a prize to the discoverer of the cause of yellow fever, but not a cent to pay him for, or during, his labors; and if he dies of the disease during his studies, it cares nothing what becomes of his family.

With cholera at our doors, the citizen suddenly wakes up and begins to wonder how it came there. He now wants legislation, which, like his restaurant dinner, must be half-done and served in a hurry. It is the result of practical experience that has led monarchial governments to the appreciation of the fact that "public health is public wealth," and that there must be such a thing as State Medicine.

Whatever tends to render the State prosperous is directly beneficial to, or shared in, by the government, and whatever tends to injure any national interest, and the public health is the greatest, at once reacts unpleasantly upon the government. Let us make this apparent by some examples. The balance of power, other things being equal, was at once placed on the side of Germany by the presence of cholera in France during the past summer. The loss of 100,000 men by either of these nations from disease would be liable to have an instantaneous effect upon the peace of Europe and the stability of some of its governments. Again, there is a bovine pest, unknown to this country, but known to Europe as the "rinderpest," which is to cattle what the cholera is to men. Were this cattle-plague to break out in either of the countries named, it could cause such losses in both food material and resources as to decidedly weaken the afflicted nation. Hence it is that an active veterinary police and public health organization is not only in the interests of every individual citizen, but also to the self-interest of every government. No government is true to its duties that does not support State Medicine and regulate it.

In speaking of these conditions previously I have called attention to the favorable geographical and political situation of the United States. We are "monarch of all we survey." We have no jealous and powerful neighbors to force our government to make a careful study of every little thing which may advance or interfere with the strength and prosperity of the country. Public health is not, as in Germany, a national necessity. We are not, as Heine said of his married countrymen, "*raising food for French cannon.*" It is not necessary that we watch over the healthful condition of this food, or to see that it itself has food enough that the cannon may not suffer for material, or that we have not more food for them than an opposing nation can consume, and thus overrun our boundaries and wage war among our cities, or devastate our harvest-fields. Not one of these questions strikes directly at the vitality and prosperity of our Government, and the same is true of that of Britain itself. But if public health is not with us as a national necessity for these reasons, it is still of vast importance as a matter of public wealth, *i. e.*, to our national prosperity.

No one organ of a body can become badly diseased without the others suffering; so, no one locality of a nation can become the seat of some death-dealing epidemic without influencing the remainder according to the violence of the outbreak and the importance of the interests thus interfered with. The rinderpest starting on the Atlantic coast and extending westward over the country would cause an immense amount of loss and misery to many individuals; the cholera may cost us many lives, and interfere with business; but not one, or all of these things will, or can, cause the least trouble to the Government on account of our situation. The unharmed citizen does not fear that because his country is thus momentarily weakened, his sleep will be broken by the clarion sounding "To arms!" Stocks rise and fall, and he profits thereby.

It is the duty of every government to study the needs of the people, to support research in order that all the resources of the country may be developed, and new ones found; that the people may, in confidence, pursue their daily vocations, and not wait, as is the case with us, until public excitement makes the government act. There is always danger in delay. The "wolf" finally comes to governments, and nations as well as the sheep suffer. All true governments must be parental, whatever their constitutional form may be.

I have already shown what form it should take so far as the medical profession have a duty in the matter. Coming back, then, to the question of State Medicine, we find that we have in reality to deal with very serious pathological conditions. The first difficulty is to know what to do with our school system and its numerous inequalities? We are well aware

that there are altogether too many medical schools in the country. In the future we must endeavor to increase the quality, and not the quantity of graduates. We cannot fall back upon Examining Boards elected by the profession, and authorized by the Government to issue diplomas, as is the good fortune of our confrères in Britain. The schools are too many, the profession too split up to make this practicable. A reform can only be made possible by the concerted action of every true man in the medical profession in the United States.

Every medical school in the country must be made, by laws common to each State, to begin and end its course on the same day of the same month each year, and to have exactly the same number of courses.

The education must be made approximately the same in all of them from the qualitative point of view.

We must unite and have a legal stop put to the endowing, or incorporating of any more schools in States where one endowed school already exists.

There is no necessity for any special schools. The charters of any schools that cease teaching in any State where one endowed school still exists—it matters not to me if the surviving school be Homœopathic—must be cancelled forever, and no new one chartered; the remaining school must be made scientific by State force.

We must all do our best to strengthen the best endowed school in our respective States—irrespective of our Alma Maters—no matter how conservative, or mismanaged it may be. It is a better policy to reform such than to weaken it by starting a weaker opposition school. We must remember that medicine is a profession and not a business, and the schools must be made to pay by delivering good goods.

The question of what shall be the examining and diploma-granting power is surrounded with difficulties, many of which would be removed were all the above conditions complied with. Given, State schools, then none but the Faculty should be the examiners. Under existing circumstances, it would seem as if this power should rest in the State Board of Health, which should not be, as in Massachusetts, one of lunatics and paupers as well. A Board of Health should be composed of a number of the most advanced specialists upon Hygiene in the State, and a Hygienic Engineer and competent jurist. It matters not what party they belong to or what church they attend.

The Regulation of the Practice of Medicine.—It is now too late to make all the schools State institutions, still, they should all be made to wheel into line and be made a part of the Public Service of the State. This is not the difficult task it appears to be. The Board of Health must be the examining, diploma-granting, and licensing-to-practice body for each State, and the schools must govern themselves accordingly.

Schools not coming to terms, or persisting in sending out too many incompetent graduates, to be permanently closed by law after due notice. The thing is to kill out this school pest, which is as infectious as the cholera. It must be made impossible for any person to practice medicine in any State as an "M.D.," "Doctor," "Doctress," "Physician," or "Surgeon," without having first passed the legal examination, and received the diploma and license of the Board of Health of said State. A record must be kept of all students graduating, description of person, age, parentage, etc., and number of license. When said graduate settles for practice in a given locality in said State, said license must be shown to the local health officer, or selectmen, who should take its number and verify it by correspondence with the State Board of Health.

Practitioners who have practiced medicine under the above conditions in another State should, on leaving said State to remove to another, have their license endorsed by the Secretary of the Board of Health and local officer of the State where he has been in practice. If the conditions in said State are accepted as equal to those of the State into which he moves, the Secretary of the Board of Health will simply verify his license, and he shall be allowed to practice under the above conditions.

The public health organization is thus made to hold in its hands the keys by which to lock up quackery and incompetency within the narrowest possible limits. We have already removed the charm of the charlatan by taking away from him all the titles by which he can misrepresent himself to the public. The power to check swindling of the same nature should also be given to the State Board of Health with reference to the use of the same titles by the "patent medicine" proprietors in their advertisements. Honesty is all we demand. We want no protection—but the public does.

The medical service of the country should form one comprehensive Public Health Organization. It should include the veterinary police, all kinds of animal, vegetable and food supplies, and the regular, veterinary and irregular practitioners in its group. It should begin with a National Board of Health at Washington, and State Boards in each State.

We will limit ourselves to the consideration of a State organization. Aside from the State Board, there should be local boards in each city and large town. The country districts are now conveniently divided into counties, each of which should have its chief health officer and veterinary police official; the counties should be districted, and each district should also have its official representing preventive medicine in each profession. The markets and slaughter-houses in the State should all be State or local property; no large food animals should be killed outside of them. The State should appoint the inspectors. None of these officials should be appointed by the local authorities. All should be paid by the State. All should hold position during active life, or up to an age fixed by law; no removals should occur except for cause, not political. The medical official should replace the coroner in his district. If injured during public service so as to unfit him for future usefulness, or dying from injuries received therein, the public health official, or those directly dependent upon him, should be subject to pension.

The medical officials of the State Board of Health

must of necessity be at first appointed by the Governor; the engineer and jurist should be selected by the medical officials. All local officers should receive their appointment only after having shown their fitness by examination before the State Board. All vacancies should be filled, as far as possible, by the advancement of local officers from the lower grades, the latter to be filled by competition when necessary. Vacancies in the State Board to be filled by promotion from the most able of the county officials.

The pay of this health organization should be graded accordingly. Before being eligible for competition for the positions in this organization, each competitor should be obliged to attend a special course of studies, for which the State should supply all the means and opportunities free. The State Board of Health of each State should have at its disposal a well-ordered laboratory with funds sufficient to make continued chemical, biological and pathological researches and experiments. A place also where any one desiring so to do could go and devote himself to the same kind of work, the State supplying the material, but not paying any such person a salary unless it made use of him. This laboratory should also serve as the place for the instruction of those desiring to compete for appointments on the health organization, and also as an advanced school of medicine for those desiring special courses in the above branches. The private workers could thereby pay their way and become useful servants to the State as well, at no cost.

Having almost completed our task, it is simply left us to show the only practical way of regulating the practice of medicine without interfering with the personal rights of the American citizen. The whole practicing fraternity, regular and irregular, human and veterinary, should be obliged by law, to report to the nearest State medical official the existence of the suspicion of any infectious or contagious disease in any person, or animal, to whom or which their services should be called. The State Board of Health should publish a list of such diseases, as well as a code of instructions and laws for the guidance of the officials and public where they occurred. Any violation of these regulations should be punished by fine, or imprisonment, according to the nature of the case. Ignorance should never be accepted as a mitigating circumstance.

THE PROMISE AND POTENCY OF CLEANLINESS.[1]

BY GEORGE HOMAN, M.D.,

OF ST. LOUIS.

The soundness and value of any opinion held concerning the origin or impulse of infectious or contagious movements taking place in the human system, or amidst human populations, must of necessity depend upon the reasonableness of the evidence brought forward in support of such view or opinion; and, of the various hypotheses advanced by different writers to explain their occurrence or beginning, as the vital cell (Beale), the nervous theory (Richardson), or the parasitic-life doctrine, as expounded by Pasteur, Koch and others, the evidence afforded by observation and experiment in favor of the last named, seems to largely out-weigh the arguments put forth in behalf of the two first mentioned.

Aside from the many nearly conclusive showings yielded by experience and demonstration—all pointing to the active presence of living particles as the influential causes and movers of displays of infectious or epidemic power—there are additional strong arguments in its favor drawn from analogy, so that the reasonableness of the statement that certain life-forms, in varied and multiplied shapes and phases, do exist, and descend in size, and recede in vital aptitude, until they pass beyond the reach of even the assisted human vision, does not admit of doubt or valid questioning.

The inquiries and findings of searchers in this domain of nature, both those who work in the panoramic field disclosed by the microscope, and those others who test and turn to useful everyday account, in medical and surgical practice, the available profitable knowledge thus gleaned and gained, all tend with increasing force toward this conclusion; and toward the identification and arraignment of suspected, or accused, disease-bearing or disease-causing entities. Observers in this field of miniature activity and life, gave the needed substantial backing and scientific confirmation to the already existing conviction in the professional, if not public, mind that therein was to be found the lucid explanation and rationale of many morbid processes observed, which were always consistent and symmetrical in the main as regards their individual evolution and sequence, but which differed widely when compared one with another in respect of intensity of action and effect upon the economy and health of humankind, whether considered in the individual person or in the aggregate mass.

Prior to the light yielded by such investigations, that which is commonly known as dirt was generally thought to be inert, if not positively wholesome, in its nature; and the suggestion that systemic hurt, and lasting harm to health, could be caused thereby was likely to be received and treated with scornful surprise and disbelief. The inflammation that often followed slight traumatic hurts, as scratches by the claws of animals, or the human finger nails, was ascribed to the poisonous nature of these structures themselves, or to a constitutional fault or vice in the recipient, and not to the foreign matter, carried or admitted by these weapons into the inflicted wounds.

The practical and dominating recognition by Lister and others of the fact that multiplying organisms, capable in themselves of much harm to health, and danger to life, may and do dwell or lie hidden in matter impalpable, and that which is seemingly most inert and innocent, compelled and centered general attention inflexibly towards this point; and from this epoch dates the gospel of exacting cleanliness which is now preached and practiced with results that mean more positive good to susceptible, diseased or wounded in primitive matter resided the promise and the po-

[1] Read in the Section on State Medicine and Public Hygiene at the Thirty-Sixth Annual Meeting of the American Medical Association.

humanity than any before recorded in the annals of medicine. The forms, features, functions, aptitudes and belongings of these denizens of the lesser world are being searched out, studied and described by enthusiastic explorers with as much zeal and care as the fauna and flora of the larger world have been scrutinized and arranged in classes, families, etc.; their true offices in nature, and precise relationship to man, either as helpful servants, harmless visitors or guests, or as invaders warring fiercely against the powers of his life, are likewise being closely studied and defined, with results that betoken increasing good, and only good, to the human race; and, also, to the animals that have been domesticated to serve the comforts and needs of man.

Cleanliness of the body and physical sphere of the individual, in sickness or health, is godliness already attained in the flesh; the soap and water crusade long time proclaimed for the outward cleansing has no novelty, but the suggestion of a general systemic befouling of a country or community, and in the sick, wounded or lying-in, through the medium of organisms filth-born and bred and dirt-borne, is much newer to the public mind; and the term dirt must needs be understood as being generic in nature, and comprising matter volatile as well as solid, aqueous as well as earthy.

The effective warfare waged against dirt and its abounding mischievous offspring, in the fields of medicine, surgery and midwifery, began less than a generation ago, although the vital span of preceding generations had been influenced somewhat by the definite, but not widely concerted, efforts of those whose minds discerned the coming light, and whose faith and works were inspired and guided by clear perceptions of the dawning and desired era of skillep and accomplished hygiene. If the statement be true that "crime is begotten by sin, and sin is begotten by disease, and disease is begotten by filth, and filth is begotten by ignorance," then truly the fulness of time has come for the revelation of the truth of the generally close and evil union of disease and dirt, in the average human body, to receive full recognition and general acceptance.

The term cleanliness thenceforth took on a new and deeper meaning, for with no less regard paid to the palpable and external, it descended and penetrated to the minutiæ in everything designed to cripple, baffle or destroy the clearly recognised existences whose survival was not compatible with safe or wholesome human living. It searched the recesses of earth, air and water, to find and purge away every possible source of harm to man, singly or collectively; by physical forces, by mechanical means, by chemical agents, by forethought and afterthought, this warfare is being carried on, and cleanliness in a public health or surgical sense, no longer means a mere soaping and wiping of hands, or a whited and pleasing exterior, but a thoroughgoing radical safeguarding, from top to bottom, and from centre to circumference, of everything and everybody susceptible or liable to the invasion or influence of the emissaries of infection that proceed from either palpable dirt or invisible foulness.

The memorable declaration made by Tyndall that tency of every form of life, may with confidence be paralleled by the assertion that sooner or later around, about, or within us, above us, or below us, there lurk or lie dormant, awaiting the time and soil and circumstance of their fit development, the seeds or agencies that have in themselves the promise and the potency of all the spreading or wasting ills, that tell most grievously against human health and life.

The purport and the practice of cleanliness carries the sanitarian, the physician, the surgeon and the obstetrician alike into a realm towards whose inhabitants it is his conscientious duty to bear no message of peace or good-will. The good of the individual and the public alike requires that no truce be declared in the conflict waged against the septic or noxious generations, issuing from material uncleanness of whatever sort, circumstance or degree. To unsparingly lay waste the soil or breeding places that give birth or cradle to the active causes of the fevers and fluxes of persons and populations, and to urge others to do the same, is the bounden duty of every one whose knowledge or instincts that way lie. To do less is to go back to darkened times in civilization and medicine, when human habits and customs favored the uprising of disease in many forms; while the light of to-day compels every reasoning person to bestir himself and starve and slay whatsoever it may be, in lowly predatory form, that finds refuge, or power, or habitation in dirt, and issues thence to threaten may be his life, or to assail the integrity of his health or physical well-being.

How this may best be done, may not even yet be settled to the satisfaction of all; but fortunately, along with the recognition of the untoward influence of minute organisms upon individual or general health, came a widening knowledge of means and measures useful and efficient to ward off or neutralize their hurtful power. The employment of sewerage and other sanitary measures and methods in behalf of population health, was followed by the development and employment in all branches of medicine of resources and expedients to protect the individual patient or person from the bad effects of agencies begotten or nursed by the hoarded dirt of hospitals or households. Having well founded confidence in cleanliness, in the full modern meaning of the term, the surgeon for example may to-day explore serous and synovial surfaces and cavities with as little fear of evil result as the skin, or mucous surfaces, were approached by him a generation ago.

The potency of cleanliness is shown by its wasting and destructive effect upon the sources and energies of the living forms that beset the health and life of man; its practice means annihilation to the many forms of existence that spring into noxious activity because of his ignorance, apathy or improvidence. The power of cleanliness being known, its promise is that mankind may, by increasing knowledge, vigilance and care, both in person and population, attain health and length of days unknown before—an achievment that will sufficiently vindicate the claim of this department of science, that increase in the span of generations and in physical capacity to enjoy life, are among its legitimate and appointed fruits and offspring.

OBSERVATIONS ON THE CAUSE AND TREATMENT OF INFANTILE ECZEMA AND ALLIED ERUPTIONS.[1]

BY HENRY T. BYFORD, M.D.,

OF CHICAGO.

In the winter of 1880, I was called to attend Mrs. R., in confinement with her fifth child. Two of her other four had been born dead; the other two, born apparently healthy, had died in convulsions at the ages of three and ten months. Both of the last had, before death, suffered from a scabby eruption, and become somewhat emaciated, but had not, as far as I could determine, been considered syphilitic. The child born at this time was, at first, apparently healthy, but, in a short time, broke out with an eruption that had the appearance of an ordinary eczema pustulosum, and which affected its scalp and different parts of its body. The only other noticeable symptom was progressive emaciation.

A physician seeing the child for the first time at the age of three weeks, would have been excusable, without the family history, in considering this a strumous case, and in treating it with cod-liver oil. Minute doses of calomel and mercurial inunctions quickly transformed the unsightly, emaciated sufferer into a healthy, well-nourished infant.

In the summer of 1876, I was called upon to treat a young child, Augustus G., with pustular eczema confined to the scalp, excessive nocturnal restlessness and progressive emaciation. This being the first child, there being neither copper-colored areolæ nor other characteristics of a syphilide, but for the acknowledgment of the father of a former, but seemingly perfectly cured attack of syphilis (an acknowledgment not always made), mercurials would, as a rule, have been avoided by an attending physician. Yet the eczema rapidly disappeared, and the infant was soon gaining in flesh upon calomel powders and mercurial inunctions.

To contrast with these syphilitic cases, I wish to relate another in which I know there was no possibility of a syphilitic taint, as I had been in daily communication with the father for three years before his marriage, and have often treated his family since. The patient, E. H., one year old, was unusually fat and well nourished, and had an eczema on the head which spread over the body in patches, in spite of the prolonged local treatment of one of our most intelligent practitioners. I recommended one-fifth of a grain of calomel to be given twice a day, and an ointment composed of one dram of carbolic acid in an ounce of the oxide of zinc ointment. After ten powders had been taken the eruption began to give up some of its area, and had almost disappeared by the time the thirty powders, first prescribed, were gone. Soon afterwards the eruption began to spread again, but was promptly cured by more of the powders. The child, having been overfed, was of course put upon a proper diet, by diluting the milk and infant food it was already taking, and withdrawing all other. The child has since remained well.

I have notes of a case of eczema, attended in 1880, in which the eruption extended to the eyelids, causing such conjunctival sensitiveness that the child lay motionless in its cradle, with its eyes bandaged by day and night. Every attempt to move it or remove its bandages elicited either moans or screams. I thought the child, which was a little over a year old, the most miserable one I had ever seen. I prescribed quarter-grain doses of calomel twice a day, to be given until they produced a laxative effect, then once a day only. Carbolized oxide of zinc ointment (℥j to ℥j) and a borax eye-water were prescribed for external use. Improvement did not take place until the powders had been taken regularly for several days, when it commenced, and, in a few days, rendered the little patient comfortable, and able to endure a moderate light. When, later, the calomel treatment was neglected, the case relapsed, in spite of external applications; but a return to it soon cured the eruption, and improved the condition of the patient.

Many other severe cases of the disease have come under my care, and whether the eruption confined itself to the head or ran all over the body, whether the patient was syphilitic or not, strumous or plethoric, they were all similarly affected by calomel. When treated without this remedy, their recovery has usually been very slow, uncertain, and often temporary.

It is an old popular belief, not utterly unfounded, I think, that the rapid drying up of these head eruptions by strong applications does some harm to the system, especially the nervous system. With the aid of calomel and external applications, I have rapidly dried up scores of such head eruptions, without having observed any but good results, and consider the coexisting digestive disorders as the causes of any head symptoms that may arise.

The frequency of occurrence of eczema in infants, the large size and great activity of the liver in early life, and the striking, I might say specific, action of calomel, have led me to associate liver-indigestion with infantile symptoms of eczematous nature in the relation of cause and effect. Even in many syphilitic cases the sallow complexion of the skin, and nocturnal restlessness, have seemed to indicate liver disorder of syphilitic origin. In these cases, the alterative powders often produce an amelioration in the skin troubles, sooner than they could through their direct action upon the blood poison; and hence the mercury should be used so as to affect the liver as well as the blood.

A properly regulated diet is necessary, and in some cases is all that need be recommended. But the negative action of diet alone, and the increased debility that would, in the meantime, follow with strumous children, whose disordered and debilitated digestive organs would be slow to assume healthy, vigorous function, makes it very injudicious to wait for such action. Some of my earlier cases were cured without any regulation of diet.

While disordered digestion is usually considered an important factor in certain instances, and a regulated diet, with occasional laxative doses of mercury, are often advised, I know of no authority who has

[1] Read before the Chicago Medical Society, on August 17, 1885.

considered derangement of the liver, and its accompanying digestive disorders, as the chief predisposing cause, nor of one who has recommended calomel (or its equivalent of blue mass or mercury with chalk) as the chief remedy for the vast majority of cases. In fact, most authors remind the reader that no one remedy can be generally relied upon.

From the fact that many of my earlier cases got well without a regulated diet, that so much calomel produced such prompt relief, and that improved digestive power usually follows, rather than attends, the action of the remedy, I am led to believe that the cure is brought about, not merely by improvement in digestion, but by a removal of waste, irritating materials from the system, which are often the main exciting cause of the eruption. And from the great efficiency of mercurial over other laxatives, I believe that the irritating materials are not only in the retained fæcal matter, but also in the blood—the products of imperfect digestive assimilation and excretion. There is no doubt that mercurials do much to clear up the urine and to restore normal ingredients to the fæces.

Occasional doses of phosphate of sodium, and other saline aperients, act in a similar way, but much less promptly. And the same may be said of castor-oil, which has proved efficacious in the hands of L. Duncan Bulkley (JOUR. AM. MED. ASSOC., July 25).

The strumous and nervous conditions so often observed may, I think, be the causes or effects of the disordered digestive organs, but are seldom the direct causes of the eruptions. Even the beneficial action of cod-liver oil is explainable upon dietetic principles; for pure oil is a much more proper and natural aliment for young children than oatmeal, potatoes, fresh bread, stale cow's milk, and many other table articles of diet that are daily imposed upon their immature stomachs. This oil helps, like castor-oil, to remove fæcal accumulations. With infants fat is a normal ingredient of the healthy fæces.

My excuse for ever resorting to such heroic dosing with calomel, was that a large proportion of my severe cases was traceable to a syphilitic origin; and noticing that these cases bore the remedy so well, I began to try it where I only suspected syphilis, and finally in all cases. I have usually given from a quarter to an eighth-grain powder, according to the age, twice a day, leaving directions that they should be discontinued as soon as purgation commenced, and afterward given as often as the bowels would tolerate them without much disturbance. Their effect, more than the age of the patient, determines their size and frequency of administration.

As children over two and one-half years are very liable to be salivated, I usually give them a single purgative dose of calomel every six or eight days, and trust to diet and other remedies in the meantime. For instance, I was called two years ago to see a boy four years old suffering with patches of eczema about the head and upper part of body, who, although under active medical treatment, had been in about the same condition for several months, except that he was getting worse. While poorly nourished and pale, he was a hearty eater, and was fed upon eggs, potatoes, oatmeal and other stimulating food, with fruit sufficient to keep the bowels regular. I ordered two grains of calomel to be given at bedtime, and some powders containing each one gr. of ext. of pancreas (F. Bros. & F.), three grs. of bicarb. of sodium, and eight grs. of subnitrate of bismuth: one before each meal. The diet was restricted to milk, beef extract, bread, toast, crackers, rice and fruits. In six days, finding some improvement, I ordered the same medicines and diet. In a week more I found him greatly improved in general health and partly rid of the rash. Recovery was uninterrupted, rapid and permanent, the parents having in the meantime learned how to feed him.

Acute cases may, of course, be greatly benefited by protecting the inflamed skin from all external irritation. This may be done by keeping it constantly covered by simple cerate purified by a few grains of carbolic or salicylic acid to the ounce, or by vaseline, the object being, as already stated, to protect, not to medicate, the skin. In chronic cases, I know of nothing that will allay the itching and stimulate the skin to healthy action as quickly as an ointment composed of one dram of carbolic acid to the ounce of oxide of zinc ointment, constantly applied. I have used this formula in nearly all chronic cases, and have found the combination soothing instead of irritating.

That I am somewhat out of fashion with my calomel I will admit. In one of our latest and best exponents of the present state of dermatological science, I find the following sentence: "Lastly, patients of both classes (of eczema) are to be saved from mercury, arsenic and iodide of potassium." I can only offer as my excuse, that I have found the treatment under consideration almost uniformly successful, and that I would like to do what little I can to aid others in simplifying the management of this most fickle of all diseases, in finding the centre of this Chinese puzzle of dermatology.

Finally, I would like to say that I do not think it really best to treat the majority of cases in this heroic manner, being usually forced into it by the critical impatience of parents and friends, or by the impossibility of securing a prolonged and intelligent attention to the diet. I would also like to remind any who may chance to thus prescribe calomel, that unless they give it with a proper understanding of the conditions and requirements of the case, they will be just as apt to fail with it as druggists and nurses are apt to fail in curing malaria with quinine, and much more liable to do injury.

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FEMALE EDUCATION FROM A MEDICAL STANDPOINT.[1]

BY S. H. HAMILTON, M.D.,

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The human organization ought to be, and under favoring circumstances is, much like unto a well-constructed and well-regulated piece of machinery, each part of it performing its function by drafts of power

[1]Read before the Military Tract (Ill.) Medical Society, May 12, 1885.

upon the nerve centres sufficient for its wants. The central power should be in exact proportion to the demands of all the parts, each of which should bear a just co-relation to every other, thus securing a just division of labor, and a machine-like accuracy of movement, constituting what we see *sometimes*, perfect health. *Mens sana in corpore sano.* This perfectly developed and perfectly acting human machine is but rarely met with, from a variety of causes, some of which reach far back in the embryonic stage of existence, where the hereditary weaknesses and imperfections are no doubt stamped upon the very germ of life, and follow it to the death. Added to these hereditary causes of imperfect development, which are beyond our control, are a host of others brought about by careless management of this complex machine during its period of growth, and after maturity, which are amenable to intelligent care and professional treatment.

The sexual system of woman, up to about the fourteenth year of her age (more or less) is but little beyond the embryonic state, and practically exercises no influence over her general organization. The next four or five years form an epoch in her life full of danger to her future health and happiness.

This complex group of organs must obtain, if at all, its complete development within this period. If from any cause it is sought to be deferred to a more convenient season, the golden opportunity is forever lost. The woman remains for the rest of her life a maimed creature. The responsibilities and burdens of womanhood come upon her all unprepared, and she is destined to the miserable existence of an invalid. It is not held that all sexual maladies are caused by imperfect development. Lack of intelligent care during the menstrual nisus, vicious habits, bad management in child-bed, and many other causes, produce similar results. It seems clear, however, that a very large percentage of these diseases are directly traceable to an imperfectly developed sexual system, favored by an imperfect and ill-timed system of education. Imperfect, because that the knowledge necessary for the proper care of her life as a woman cannot in the nature of things be imparted. Ill-timed, because that severe mental labor at the period required cannot be indulged in without serious injury to physical health.

I do not believe that intellectual culture necessarily dwarfs the reproductive faculty in women, but it seems quite clear that it does so, obtained, as it is, under our present system of education. Statistics all over the land, especially in the New England States, reveal the alarming fact that the increase of population is entirely in the lower and uneducated classes of society. The vicious, the ignorant, and the poverty stricken hordes from over the water are multiplying rapidly, whilst the better part of our people, those most valuable to the State and society, are actually decreasing year by year. Small families or no children, is the rule among educated people.

That this deplorable condition of things is chargeable largely to our present system of education for girls, seems clear to any careful observer of its workings. There is no way of accounting for the extreme laxity in morals, and apparent recklessness of bodily injury, pervading the so-called educated class of society, than on the hypothesis of extreme ignorance. The unnatural and disgusting means of one kind or another preventive of conception; the wide-spread habit of producing abortions in the early stages of fœtal life, are surely oftener chargeable to lack of information than downright wickedness.

Co-education of the sexes, which means "identical education," under our present high school and college system, is entirely unsuited to anything like proper education for girls. It does seem like the very essence of folly to set up a common system of training, for two sets of human beings, so essentially different, in both their physical and moral needs. It is admitted that as much of mental culture as is consistent with good health, is especially required for women. The welfare and improvement of the race demand it; the happiness and comfort of both sexes require it; and it is a well-established fact in the physiology of generation, that children, male or female, inherit the intellectual faculties of the mother rather than the father. Mental discipline acquired in the schools is as necessary for women as for men; but it should not be forgotten that the most important to them of all studies is the study of *themselves* as *women*, so that they may coöperate with, and intelligently use, all the necessary appliances to secure a full and healthful development of the sexual system, take proper care of the same, and be able to meet and solve correctly the various moral questions growing out of her duties as wife and mother. I know that in these days of *womanish men* and *mannish women* it has become almost a crime to talk even in a whisper about the true "sphere of woman" being confined to the so-called "narrow limits of home." Nevertheless, we will take the risk of saying, what all observation proves to be true, that just so soon as she steps outside the charmed circle of her duties as wife and mother, and wilfully neglects their fulfilment, she throws away her best chance for a happy and useful life.

The best education for girls, then, is that which best prepares them for the legitimate duties of womanhood. The time selected for its accomplishment should be chosen, and the thoroughness of the course regulated, so as to be consistent with good physical health. High intellectual culture, valuable as it is, and so much to be desired, costs too much when the price paid for it is a ruined or greatly damaged physical constitution.

The sexes are essentially different intellectually as well as physically. Extreme nervous impressibility; the strong reflex movements from the sexual system upon the intellectual nerve-centres, in health and disease; the notable lack of the logical faculty, as well as muscular power, show conclusively that the requirements in the education of the female are widely different from the opposite sex, and that a system such as ours, framed as it is specially for the boy, is unsuited to the girl. She is practically cut off from the most useful of all studies, to her, minute sexual anatomy and physiology, for it is plain to any one, that these subjects cannot be properly and effectively

taught to mixed classes of boys and girls. Our system, as it is now framed to suit the boy, tends to *unsex* the girl. If changed to suit the girl, it would unsex the boy. A hybrid system would be unfit for either, and dwarf the strong characteristics of both. A plan of education should be devised for each, *non-identical* and unlike, as the non-identity and *unlikeness* of the mental and physical lives of the parties. Our objection to identical, or, as it is called, "co-education" for girls, is not limited to considerations of the kind or quality of instruction they receive. As before said, it is a plan of instruction elaborated specially for the boy.

As a rule, girls enter high school or college about the time, or shortly after the commencement of the epoch of puberty. At this time, the whole physical and intellectual being is strongly impressed by the rapid development just begun. The vital forces of the body are largely employed in building up this most important portion of the human anatomy. The growth of bone and muscle ceases, or is greatly retarded for the time. Deposit of fat is made in the subcutaneous cellular tissue, giving to her face and figure that roundness, and softness of outline, so attractive to all who look upon her. She becomes easy and self-possessed in her manners, and graceful in her movements. Everything about her shows that important changes are rapidly going on in her mental and physical organization; the interruption of which must be attended with peril. The nerve centres are no doubt, during this time of active development, using all their surplus nerve force in this work. Is it safe to subject the girl at such a time to hard and continuous intellectual labor?

It is a well established fact that brain work uses up the vital forces of the body much faster than muscular exertion, and to divert this nerve power largely from interstitial growth to mental labor, can have but one result, partial or complete arrest of the building-up process in the other direction, and if continued, the foundation is laid for long years of suffering; suffering from the vain efforts of a half formed organ to perform the duties of one fully grown. "Nature can be helped or hurt, but rebels against entire suppression." The time for the education of girls established by a well-grounded, but erroneous public sentiment, and by all-powerful fashion, is the most improper possible, considering their physical needs. Ambitious mothers are anxious to have their daughters married at twenty (and the daughters generally concur). A good education (so-called), and *accomplishments*, must be obtained against that time, be the consequences what they may. As a rule, the result is, greatly impaired or permanently ruined health, a life of sterility, general unhappiness, and uselessness.

It is not held that *all* female graduates of our co-educational institutions are ruined thereby in physical health. A few escape unhurt. Many are badly injured; many ruined for life. Enough damage is done year by year, to excite the gravest alarm, and the subject ought to elicit the best thought, and the serious attention of the community.

With co-education as a fixture any reform, in the range of possibility, can only be palliative. The system is wrong from foundation to turret, and no amount of patching can make it perfect nor strip it of all its evils. Nevertheless something might be done, in the way of improvement. As thus: Let the girls learn all they can in school, whilst they are children. Then so soon as the first signs of approaching puberty appear, withdraw them at once from close application to study. Let them learn domestic economy, and for this purpose, the kitchen is a rich mine of useful knowledge. They should learn sewing, plain and ornamental, embroidery, music, read the daily papers, and other well-selected light literature; and, above all, should take plenty of fresh air, moderate outdoor exercise, and good food. Then when girlhood has given place to womanhood, the functions of ovulation and menstruation fully established, the muscular and bony structures up to their maximum of growth, then let her take two or three years of earnest, solid work, in school. She will be better educated thus, and better equipped at the same time for the great duties of her life, those growing out of her surroundings as wife and mother. This seems to us the best that could be done with coöperation, but the system is intrinsically faulty, in that it takes no notice of, and makes no provision for the most important fact that girls are unfitted, by the claims of exacting nature for mental labor, as a rule, about one-fifth of the time. They cannot work effectively, nor safely, during the menstrual period, and yet "co-education" requires of them, during this period of disability, the same work exacted from the boys, who are not so disabled.

Radical reform of these grave faults, in our really meritorious system of education, will be found in "schools for girls," founded upon correct physiological principles, where the girl will be recognized, and the peculiar mental and physical needs of her organization provided for. One such school at least, has been in operation for several years with admirable success.

Let us hope then, as it is not an experiment, but a well digested, and well tried enterprise, founded upon the soundest reason, it will hereafter be an important factor in the solution of our educational problem.

MEDICAL PROGRESS.

ANATOMY AND PHYSIOLOGY.

HEMIALBUMOSE OR PROPEPTONE.—Another one of the proteid substances sometimes found in urine, and to which increased attention has been called by reason of the introduction of the so-called delicate tests for albumen, is hemialbumose.

This substance is an intermediate product in the conversion of albumen into peptone, in the act of gastric digestion. It is therefore abundantly present along with albumen in the gastric contents, and, unlike peptone, is also found in the blood during digestion. It is identical with the albuminous substance known as Bence Jones's albuminous body or Mulder's proteindeutoxyd found by Virchow in the bone marrow in osteomalacia, and by Fleischer in normal bone marrow.

Hemialbumose, like albumen, is insoluble in alcohol; also insoluble in pure water, but very soluble in water containing only traces of acids, alkalies, or salts. It is not precipitated by heat from its watery solutions as is albumen, but if the solution be made strongly acid and concentrated salt solution be added thereto, it is precipitated. If the cloudy fluid be now heated it becomes transparent, but again turbid on cooling. A further large addition of salt maintains the precipitate in spite of heating. It is precipitated by pure nitric acid, but redissolved with the production of an intense yellow color on heating, and reprecipitates on cooling. An excess of nitric acid redissolves the precipitate even in the cold, with the production of the same orange-red color.

In these respects hemialbumose differs strikingly from both peptone and albumen. It is like peptone in that it exhibits the biuret reaction with an alkali and salt of copper, and like albumen in that it is precipitated by acetic acid and ferrocyanide of potassium.

In order to test the presence of hemialbumose the albumen must first be removed. This is accomplished by acidifying the urine with a few drops of acetic acid, adding about ⅙ its volume of concentrated salt solution, boiling and filtering off the precipitate. The filtrate is then allowed to cool, and if a turbidity arises or is produced by the further addition of salt solution, which disappears by heating, and reappears with cold, propeptone is present.

Hemialbumose is removed from fluids by adding acetate of iron and boiling, or by boiling with hydrated lead oxide.

Hemialbumose was first found in urine by Macynter and Bence-Jones, in the disease known as osteomalacia, and by Lassar in artificial nephritis.—*Medical News*, Aug. 15, 1885.

MATERIA MEDICA AND THERAPEUTICS.

Jequirity in Lupus Exedens and other Chronic Ulcerations.—Dr. Arthur Hawies gives the following as his experience:

The berries are macerated for 24 hours to soften the husks, which are then carefully picked out after bruising in a mortar. The remainder is crushed with half its weight of glycerine and three times its weight of water, until a *smooth paste* is produced. This is plastered thickly over the diseased surface and retained in position by a piece of beef. After 24 hours the patient begins to complain of malaise, with slight thirst and some quickening of the pulse, these symptoms lasting 48 hours, never less. There is scarcely any increase of temperature (in one case the temperature rose to 100.5° on the third day after application).

On the third day suppuration has commenced, and an unpleasant smell from the dressing is perceptible. On the fourth day, and subsequently, the suppuration is more profuse, the *smell* is very marked, to the extent of necessitating the placing of deodorants in the ward and in the neighborhood of the patients; the malaise disappears, and the patient's appetite improves in spite of obvious inconveniences.

On the tenth day the dressing is removed, a healthy granulating surface is exposed, having the following peculiarities: The circumference is diminished by about one-third, the new skin at the margin exhibiting the typical bluish tint of a healing ulcer, and from the sides of the sore a little promontory of new, healthy tissue is seen attempting to reach a fellow projection on the opposite margin. The appearance of this new tissue is like that of the margins. After two or three days' dressing with a simple astringent lotion (in his cases consisting of the potassio-tartrate of iron dissolved in water, gr. iv. ad. ℥j), these projections have coalesced, thus bisecting the original sore, while the edges of each part continuing to granulate healthily, the isthmus becomes broader, the sore surfaces smaller, until, at the end of about ten days after removal of the dressing, a fairly sound surface is left.

He has not found the treatment applicable to dry tuberculous conditions of the skin, even after scraping, so as to present a raw surface to the action of the remedy. The pus escaping from the dressing swarms with bacilli, but Dr. Hawies is not prepared to state whether they are active factors in the healing process, or whether they are present merely as concomitants of the conditions of application of the dressing.

In jequirity he is convinced that we have a treatment of great value in *chronic* ulcerative conditions, and he certainly thinks it worth trying in rodent ulcer, and possibly even in epithelioma. Jequirity should not be used in recent ulcerations—in them action is already too marked, and his experience of one case treated by a colleague has been that it caused extension rather than diminution of the sore surface.—*Provincial Medical Journal*, Aug. 1, 1885.

Iodoform in Gout.—Professor Testa (*Gazz. Med. di Torino*, 1885), having previously ascertained experimentally that iodoform fulfilled the requirements of a remedy for gout, *i.e.*, that it accelerated oxidation processes within the system, increasing the excretion of urea, and diminishing that of uric acid and oxalic acid, tried it in seven cases of gout and continued the use of the drug for months together. The dose varied from 7 to 25 cgrm. daily, given in two doses. The remedy exercised on the whole a very favorable effect. The attacks became less frequent, and their intensity and duration were diminished. He thinks its use is contra-indicated, or, at least, that it should be given with extreme caution, when the gout is complicated with kidney disease, as, in case it is not duly eliminated by the kidneys, accumulation of it in the system might lead to serious results.—*The Medical Press*, July 1, 1885.

MEDICINE.

Diabetes Mellitus Cured by Removal of the Uterine Appendages.—Dr. Francis Imlach reports the following interesting case:

K. G., a widow, aged 31, consulted me on February 12, 1885, on account of leucorrhœa and pelvic pain. A diagnosis of pyosalpinx was made out; and, as she seemed ill and wasted, operative treatment was suggested. On the 22d, she mentioned that for a

month she had been afflicted with insatiable thirst and sleeplessness; that the bowels were habitually constipated, and the urine greatly increased in quantity. On testing a sample of urine, of specific gravity 1036, no albumen was found; but, on boiling with Fehling's solution, it became evident that she was passing sugar. Menstruation was regular, and, though painful, not profuse. All thoughts of operation were abandoned. She undertook to live upon gluten-bread and biscuits, fish, meat, and buttermilk; to give up starchy food and sugar, and as much as possible to restrict her drink. Soap-and-water enemata were ordered, and bromide of ammonium prescribed for the sleeplessness. Under this treatment, the urine became reduced (from an unknown quantity) to five or six pints *per diem*; but, when samples were tested with Fehling's solution and by the differential density method, there was little diminution in the sugar. On March 16, three minims thrice daily of Clemens's solution of arseniate of bromine were substituted for the bromide of ammonium; and, a fortnight later, the dose was increased to ten minims; but, roughly estimated, the excretion of sugar continued unaltered. On April 15, she passed 2,560 grains in 24 hours. As she was becoming rapidly weaker and more emaciated, she was admitted into hospital on May 15, where the anti-diabetic diet was strictly maintained. On May 16, 1,200 grains of sugar were excreted. On May 19, the uterine appendages were removed. The right Fallopian tube was thickened in its walls, occluded at both ends, and distended with pus. The left tube was thickened, but not occluded at its fimbriated extremity, and contained only a little muco-pus. Both ovaries were so firmly adherent in the pelvis, that their removal was somewhat difficult. The fundus of the uterus, which was bound by dense adhesions to the sacrum, was liberated. The patient recovered without a bad symptom, and with a surprisingly level temperature-chart. She got out of bed on the ninth day, and left hospital on June 3. Unfortunately, I am unable to add a complete account of the urine passed subsequent to the operation, as, through an error, no quantitative measurements of the sugar were made. During the first 24 hours, between six and eight ounces of urine containing sugar were drawn off every six hours. The specific gravity during the first six hours was 1028, next it fell to 1014, and then rose to 1034.

The sugar, tested daily with Fehling's solution, gradually diminished until May 26, when it finally disappeared. On June 12, the urine was normal, and of specific gravity 1020. For a week previously she had been at home on ordinary fare, except that she took no rice-pudding, and put no sugar in her tea. She then took rice-pudding daily, with unlimited sugar, until June 19, when the specific gravity of the urine was 1010, and not a trace of sugar could be detected. There is no longer constipation, and her strength is already almost completely restored.

Glycosuria being persistent under anti-diabetic regimen, and the health worse, operation was offered as a forlorn hope. Sir J. Paget makes no allusion to diabetes mellitus among "the various risks of operations;" but Dr. Dickinson, in his able work on the subject, says that "surgery is attended with unusual danger;" and Dr. Wm. Roberts states that "operations for diabetic cataract generally fail from uncontrollable suppuration of the eyeball." Beyond this element of danger, there was the fear lest the operation should do no good. Diabetes and pyosalpinx are not known in association. The patient was married ten years previously, had a still-born child a year later, and became a widow two years before I saw her. As the pelvic pain was of indefinite origin, the pyosalpinx was probably of ancient date, whereas the diabetic symptoms were recent. Still, there remained the possibility that removal of the suppurating tubes might cure the disease. There was a further argument: the younger the person, the less hope of ultimate recovery from diabetes. "The development and exercise of the sexual functions," says Dr. Wm. Roberts (Renal Diseases, 4th ed., p. 256), "appear to have a marked effect in increasing the liability to diabetes in both sexes; and the diminished frequency of the disease in women after the age of 45 (as compared with men) corresponds with the earlier decline of sexual activity in the female sex." And not only is diabetes less frequent among women after 45; it is also less acute, and does not kill nearly so quickly. By induction of the menopause, it was hoped that the acute diabetes might become chronic.—*British Med. Journal*, July 11, 1885.

SALICYLIC ACID IN RHEUMATISM.—DR. P. W. LATHAM, the Downing Professor of Medicine at Cambridge, in an article entitled "Why does Salicylic Acid Cure Rheumatism," lays down seven rules for its successful administration:

First, the true salicylic acid obtained from the vegetable kingdom must alone be employed. If you have to give large doses, avoid giving the artificial product obtained from carbolic acid, however much it may have been dialysed and purified. An impure acid will very quickly produce symptoms closely resembling delirium tremens.

Secondly, give the acid without any alkaline base. A very good form is to mix 100 grains with 15 of acacia powder and a little mucilage. Allow the mass to stand and harden, and then divide into 30 pills.

Thirdly, place the patient fully under the influence of the drug—that is, let him have sufficient to produce cerebral disturbance—*i.e.*, buzzing in the ears or headache, or slight deafness; with the development of these symptoms the temperature and the pain in the joints will begin to decline. To an adult he generally administers three doses of 20 grains (six pills), at intervals of an hour, and if the head remains unaffected, a fourth dose at the end of another hour; and then repeat the 20 grains every four hours until the physiological effect of the remedy shows itself. In the majority of cases, from 80 to 100 grains are enough. In severe cases, 140 to 150 may be required. Afterwards about 80 grains a day are sufficient, and as the temperature declines, smaller quantities will develop their physiological effects, 60 or even 50 grains being then sufficient to produce cerebral disturbance. It would appear that

as long as the rheumatic poison is circulating in the system, the physiological effect—that is, the effect it produces in the healthy organism—does not show itself; acting as an antidote, the greater the amount of poison, the larger must be the dose of the remedy; but as soon as the formation of the *materies morbi* is stopped, then the excess of the remedy acts as it would in the healthy organism, and its peculiar physiological effects are developed. It is a very striking illustration of the difference between the therapeutical effect of a remedy, and its physiological action.

Fourthly, give the patient from 40 to 80 grains daily for ten days, after all pain and pyrexia have passed away.

Fifthly, let the patient's diet consist entirely of milk and farinaceous food for at least a week after the evening temperature has been normal. On the other hand, if the patient has meat and soup, you may look forward with fair probability to a relapse.

Sixthly, take care to maintain a daily and complete action of the bowels. Calomel is the best purgative, from 2 to 5 grains at night, followed in the morning, if necessary, with a saline draught. This is the most important adjuvant to the action of salicylic acid.

Seventhly, let the patient be enveloped in a light blanket, and with no more bedclothes than are sufficient to keep him from feeling cold. The object of the treatment now is to cool the patient, not, as in former times, to sweat the poison out of him, and the cooler he is kept the sooner will the temperature be lowered.

Dr. Latham has not yet concluded his observations, but so far he considers that though lactic acid has much to do with the symptoms, it is the excessive formation of glycocine and of uric acid in the tissues that develops the symptoms of rheumatic fever, and salicylic acid cures the disease by combining with the antecedents of these bodies, and prevents their formation. When salicylic acid is administered internally it passes off by the urine as salicyluric acid—that is, it has combined in its passage through the system either with glycocine or its antecedent, for on treating salicyluric acid with fuming hydrochloric acid, it is resolved into salicylic acid and glycocine. Consequently, in the system, by seizing either upon glycocine or its antecedent, salicylic acid takes away an essential constituent of uric acid, and so prevents the formation of this body.—*Lancet*, June 20, 1885.

External Application of Nitrate of Silver in Spinal Irritation.—Krug recommends the local application of a weak solution of nitrate of silver against spinal irritation as preferable to the solid stick or the powder. He orders a one per cent. solution in alcohol, and directs its application not only to the seat of pain, but also to the whole neighborhood twice daily. The alcoholic solution has the advantage of allowing of a deeper penetration of the silver into the tissues, and of thus producing a sort of local anæsthesia by causing coagulation of albumen and abstracting water. Krug praises the beneficent and cooling effects of this procedure, which but rarely causes inflammatory irritation. He insists, however, that the treatment should be continued for weeks and months. Cold-water compresses applied at night increase the usefulness of the silver application. This local treatment of course, is to be regarded only as supplementing suitable internal medication.—*Schmidt's Jahrb.*, ix. 203.—*Therapeutic Gazette*, June, 1885.

Diaphoretic Treatment of Nephritis.—N. Hess, having made a number of observations on the treatment of nephritic patients by wet packs, hot baths supplemented by wrapping in blankets, and hot-air baths, draws the following conclusions:

(1) The least rise of temperature occurs with packs, the greatest with hot baths.

(2) While the temperature is found to sink still further twenty minutes after the pack, it remains at the same height for an hour after both the other methods of treatment.

(3) After water baths the temperature regains its original height more slowly than after air baths.

(4) During the pack the pulse becomes slower; during the water and air baths, on the contrary, it is quickened for an hour afterwards.

(5) Under the influence of the pack respiration is moderately quickened; during both water and air baths it is still more quickened, but subsequently returns to its normal rate more rapidly than after the pack.

(6) The most powerful sudorific effects are produced by hot baths, the least powerful by packing.

(7) Though the baths are more stimulating, packing soothes the action of the nervous system, brings the patients on better, and produces a subjective feeling of improvement afterwards.—*Lancet*, June 27, 1885.

Shock and its Treatment.—In a critical study of shock intended to elucidate its pathological relations, Gröninger, of Berlin, defines shock as an exhaustion of the medulla oblongata and the spinal cord produced by violent excitation. This definition is no doubt perfectly proper, though it strikes us as if the term "exhaustion" is not sufficiently clear for defining purposes.

He recognises the following varieties:

1. The lowest grade of shock, which causes no appreciable effects.

2. A middle grade, which weakens sensation.

3. A high grade, which extinguishes qualitative sensation.

4. A highest grade, which eradicates both passing and permanent sensations of every kind.

His views of the treatment are noteworthy:

Energetic counter-irrations of the skin are to be excluded as useless and even dangerous.

Abstraction of blood is contraindicated.

Transfusion of blood can only be thought of in cases of great loss of blood.

Opium and chloroform are of no value whatever in shock, while digitalis is worthy of further study.

Alcoholic stimulants and subcutaneous excitation are useful. Horizontal posture, application of warmth, perfect rest, and subcutaneous injection of strychnine are the most recommendable factors of treatment.—*Therapeutic Gazette*, June, 1885.

SURGERY.

TREATMENT OF PALMAR GANGLION.—*The Lancet*, June 27, 1885, lays down the following rules for treatment of palmar ganglion, as in accord with the best and most recent views of surgical authorities on the subject. The first point of importance is to attempt the cure of the cases as early as possible. No good can come of delay, which merely leads to greater distension of the cyst, and is especially to be deprecated as endangering the adjoining tendons, which become stretched, and even in some cases severed, by the pressure to which they are subjected. Second, the free evacuation of the cyst and the removal of all the "melon-seed bodies" it contains, whether these be free in its interior or adherent to its walls. For this purpose an incision about an inch and a half long, not a puncture, should be made in the most prominent part of the swelling, above the annular ligament, avoiding, of course, the radial vessels and the tendons, which can be felt through the skin. Pressure should be made in the palm to force out the fluid and as many of the loose bodies as will thus escape. Then a sharp spoon should be introduced, and the whole cavity scraped, to detach any "bodies" which may be still fixed to the synovial membrane. The "spoon" is much the best means of doing this. Some have trusted to injecting a fresh stream of fluid into the cyst, but this will not remove "bodies" which are still firmly adherent to the cyst-wall.

Volkmann passes a large drainage-tube through the cyst, and draws it sharply to and fro, and trusts to that to detach any adherent "bodies;" this is, however, an uncertain method, and if the cyst be old and large, with pouches extending from the main cavity, they escape the friction of the tube altogether. Having thus carefully removed all the contents of the cyst, whether solid or fluid, a solution of chloride of zinc, gr. xl—℥i, should be applied to the whole interior of the sac, the purpose of this being so to modify the nutrition of its lining as to prevent any recurrence of the dropsy. A solution of iodine has been used for the same purpose, and some surgeons may be inclined to use iodoform instead. The most important steps in the treatment are those to be taken to secure healing of the wound without suppuration, at any rate without septic suppuration. As a preparatory step the parts must be thoroughly cleansed before the incision is made, and the operation should be conducted under an antiseptic spray or irrigation, and some efficient antiseptic dressing should be finally applied. A drainage-tube should be introduced into the wound and passed down beneath the anterior annular ligament, and only removed when the discharge through it is reduced to a minimum.

Dr. Weiss shows that if pressure be carefully applied over the palmar part of the cyst, all retention of fluid can be carefully obviated. The hand should be kept fixed on some kind of splint applied to the extensor aspect, until the wound inflicted is healed. As soon as that is accomplished, the fingers should be liberated and the patient be encouraged to move them. The results of this treatment are entirely different from those formerly met with. When the antiseptic precautions are carefully carried out, there is no danger whatever of blood poisoning or of profuse local suppuration, and the final result is the restoration of a thoroughly useful hand. The tendons are not bound down by cicatricial bands, and after a time it may be impossible to find any trace of the previous mischief beyond a linear scar in the forearm. Weiss considers that the process of cure of the synovial cyst is analogous to that obtained in a hydrocele by injection, or in dropsy of a joint treated by injection of iodine. At present no case of a recurrence of the ganglion after a septic incision and drainage has been reported.

OBSTETRICS AND GYNÆCOLOGY.

PUERPERAL CONVULSIONS WITHOUT ALBUMINURIA.—DR. N. VUCCINO, of Rodosto, writing in the Constantinople *Gazette Médicale d' Orient*, gives the case of a lady usually enjoying excellent health, except for occasional hysterical attacks, who in the fourth month of her first pregnancy was seized with a severe frontal hemicrania of quotidian type. At the end of the sixth month she was awakened one night with intense pain in the head, followed by a slight convulsion affecting the upper extremities. In the morning the writer found her suffering from general convulsions, consciousness being lost, and a bloody froth issuing from the mouth; the pulse was small and hard; but the urine was then, and continued to be, perfectly normal. Various methods of treatment having proved fruitless, it was decided to bring on the labor, which was done by injecting hot water (32°). After this had been continued for three hours and a half, the os uteri became fully dilated, and a dead child was shortly afterwards expelled. The convulsions ceased as if by magic, and in twelve days she was able to resume her household occupations. She afterwards enjoyed good health till the eighth month of her second pregnancy, when convulsions reappeared with greater intensity than before. Chloral and chloroform proving inefficacious, the continual hot vaginal douche was again employed. In consequence of the irregularity of the contractions of the uterus forceps were required. The convulsions ceased five hours after delivery, and in seventeen days she was again in her normal condition. She subsequently became pregnant for the third time, and during the second month suffered from some premonitory convulsive symptoms, which were increased by vaginal examination; these came to an end on the patient aborting. The author considers the case interesting, as showing how convulsions, due, as he believes, to a highly nervous condition of the uterus, may simulate those connected with renal and urinary mischief.—*The Lancet*, July 18, 1885.—*Medical News*, Aug. 15, 1885.

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THE EDITOR of this JOURNAL would be glad to receive any items of general interest in regard to local events, or matters that it is desirable to call to the attention of the profession. Letters written for publication or containing items of information should be accompanied by the writer's full name and address, although not necessarily to be published. All communications in regard to editorial work should be addressed to the Editor.

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INTERNATIONAL MEDICAL CONGRESS OF 1887.

A carefully corrected and official copy of the proceedings of the Committee of Arrangements for the preliminary organization of the International Congress, at its meetings in Chicago, June 24 and 25, and in New York, September 3 and 4, has been printed and sent by direction of the Secretary-General to all the medical journals in this country. Examination will show that these Rules are, in all essential particulars, in strict accordance with those which have been adopted for the organization and government of preceding Congresses. They not only open the doors to membership as widely as was done either at London or Copenhagen, but they confer upon the chief officers of the Congress and the presidents of Sections, acting as an Executive Committee, full power to make such further arrangements as may be necessary for the independent and successful management of the Congress in 1887. The Rules thus adopted are in no proper sense the result of any supposed compromise, but of mature deliberation on the part of the Committee of Arrangements, after giving careful attention to the nature and organization of preceding Congresses.

For the present, we simply ask every candid member of the profession to give the regulations and preliminary organization now adopted an impartial consideration.

THE ACTION OF DIURETICS.

Our knowledge of the action of diuretics has within a comparatively recent period received very important contributions, chiefly through anatomical and physiological sources, so that now the physiology of the renal function may be looked upon as fairly well settled. While to the researches of Bowman we are largely indebted for directing investigation into the correct channel, as to the anatomical sources of the urinary secretion, yet it was reserved for Heidenhein actually to prove what Bowman had foreshadowed, that the urine consists of a compound product whose elements are derived from two sources: the aqueous for the most part from the vessels composing the glomeruler tuft, while the solids are the product of the epithelial cells of the convoluted tubes. This at once led to a more rational and thorough understanding, not only of the physiology of the renal function and of the morbid conditions most commonly interfering therewith, but also paved the way for a more comprehensive knowledge of the action of diuretic agents, both in health and disease.

Several interesting contributions to this subject have recently appeared, among which we notice that of DR. E. LONG FOX, in opening the discussion in the Section of Pharmacology and Therapeutics at the late annual meeting of the British Medical Association, in Cardiff, South Wales. Dr. Fox dealt chiefly with the physiological aspect of the subject, more especially in relation to the influence of variations in blood pressure in increasing or decreasing the excretion of the urine, as affected through nervous influences upon the circulation, both renal and systemic. After refering to the now established fact, that the function of the malpighian body is mainly that of filtration, while that of the epithelium of the convoluted tubes is mostly to secrete (or excrete) the solids of the urine, *plus* a small amount of filtration, he points out that diuresis depends on conditions that facilitate filtration; in other words, the amount of urine depends upon the difference in degree of pressure between the blood in the malpighian tufts, and the pressure within the convoluted tubes. The renal tubules being normally patent, all that is necessary to increase the quantity of the urine, is to raise the blood pressure within the vessels of the tuft. Increase of the force, or in the rapidity of the cardiac contractions; stimulation of the vaso-constrictors of arteries other than the renal; or paresis of the latter, all bring about the above result. Ammonia, alcohol, digitalis, etc., act in the first-named manner, the external application of cold in the second, and the emotion of fear is an example of the last, all producing well-known diuresis. The cells lining the convoluted tubes performing the office of separation of solids from the blood, it is evident that conditions of vascular pressure affect this function only slightly; to some extent it must be admitted it is true, for slight filtration must take place, as Senator says, in order to carry out the solids in solution, "for no

true gland yields a secretion free from water;" but in the main, the epithelial cells are influenced by special stimuli, of which urea, uric acid, etc., are probably normal ones, and certain salines, notably salts of potash, lithia, soda, etc., are artificial ones. Certain agents both dilate the renal vessels, and stimulate the renal cells, thus exerting a compound action, the most important of which is juniper. Dr. Fox draws the deduction, that to call forth renal activity most efficiently as a whole, it is best to effect a union of diuretics, combining with those which cause vascular fulness, those that stimulate the renal cells, herein securing more thorough depuration of the blood.

So much for the physiological action of diuretics; unfortunately, however, in therapeutical use, this class of agents are proverbially uncertain in their action, "often proving most disappointing where most needed;" partly, as might be expected from what has just been said of a few of the many influences that effect, local or general vascular pressure; but more especially as the result of the various pathological changes arising in renal disease, which interfere anatomically or vitally with filtration, or excretion, or both. Something yet remains to be done in the latter field, before the therapeutic action of diuretics become as certain, and as satisfactory, as they now are physiologically, and after all, this is the most practical and important side of the question. In a paper by DR. CHARLES W PURDY, published in a recent issue of this JOURNAL, some new suggestions were brought forward on this point, in a chemico-pathological relation to the subject, which promise practical results. Dr. Purdy first points out, that anuria of acute nephritis is due for the most part to accumulation of colloid matter (casts) in the convoluted tubes, which blocking up the latter, counteract the blood pressure in the glomeruler tufts, preventing filtration and excretion of urine, and thus the reëstablishment of diuresis is an impossibility so long as the obstruction remains. He proposes to remedy the difficulty by effecting a chemical solution of the albuminous matters, which block up the renal tubes by rendering the urine alkaline. As albuminous bodies are more or less soluble in alkaline solutions, and as the urine is readily rendered alkaline by administering certain neutral salts, as acetate, or citrate of potash; he claims that the free use of the latter will dissolve and wash out the obstructing matter, reëstablishing the flow of urine, and thus relieve the congestion of the glands. As facts supporting the above, he finds that casts are soluble in the course of a few hours in urine rendered slightly alkaline, and he further points out, that casts are rarely found in urine if the latter be alkaline when passed; and lastly, that experience has generally sanctioned the superior efficiency of saline diuretics in acute renal diseases.

As a result of recent investigations into the condition of the circulation in diabetes mellitus, Dr. Purdy finds that high arterial tension is always present in his experience, as shown by the sphygmograph, similar to that which accompanies chronic Bright's disease; and he suggests that many of the symptoms of diabetes which he names, are thus thrown into clearer light in their causal relations.

We can readily understand if conditions of high arterial tension constantly prevail in diabetes mellitus, that the profuse diuresis accompanying that disease is thereby more readily explainable; and moreover, the same condition of the circulation may throw some light on the hitherto obscure pathology of the disease. At any rate, these points are worthy of careful consideration, and their further investigation may lead to practical and important results.

We cannot close this subject without calling attention to the valuable suggestions in Dr. Purdy's paper, for useful physiological work. To what is the high tension in Bright's disease and diabetes to be attributed, and to what is the cardiac hypertrophy of the former due? Are we to accept the theory put forth by Dr. Walshe, and held to a certain extent by Bright, that the hypertrophy is due to the increased resistance of the tissues (capillaries) to the passage of impure blood? Is this increased resistance (if it be present) due to the action of the impure blood on the walls of the capillaries (or possibly on their vasomotor nerves)? Again, by what mechanism does the blood become impure? "Is it by failure of the kidney—by renal inadequacy—or is it a change in the blood either primary in that fluid, or secondary to some toxic agent introduced from without or manufactured within the body?" (*British Medical Journal*, August 29, 1885). Is it not possible, again, that the high tension in Bright's disease and in diabetes may be due to some action of the altered blood on the heart itself? It certainly seems, in view of the fact that Bright's disease is accompanied by endarteritis, that the vascular complication is in some way brought about by the abnormal state of the blood, and that it is primary to the cardiac affection. Dr. Purdy's paper also suggests an interesting pharmacological question as to the cause of the good effect of subcarbonate of iron in uræmia; and the answer, it seems, must necessily be given by chemistry. The suggestions contained in this paper are quite sufficient to furnish work for physiologists for some time.

THE ETIOLOGY OF ASTHMA.

Among the laity it is very customary to denote any form of difficult respiration as asthmatic; and, indeed, members of the profession are often lax in their use of the term. Etymologically, asthma signifies labored respiration: hence, there is some justification of its employment as synonymous with dyspnœa. Moreover, medical men of olden times appear to have used these two terms interchangeably. It would be preferable, if the term asthma could be exchanged for one expressing the true nature of the distressing malady; but the word has too firm a root in our phraseology to be supplanted, and accordingly, certain adjectives are prefixed to distinguish the varieties of dyspnœa in mind. The form of suffering to which it is desirable to restrict the term, is known as nervous, bronchial, idiopathic, or spasmodic asthma; while the dyspnœa arising from organic disease of intra-thoracic viscera is called secondary or symptomatic asthma. Occasionally its relation to some particular organ is denoted by such a designation as cardiac asthma. It needs no further comment to show how objectionable is this kind of phraseology.

Spasmodic asthma, as the term implies, occurs in paroxysms, its characteristic feature being a difficulty of expiration. This peculiarity should not be lost sight of, since it distinguishes this form of dyspnœa from that dependent upon structural disease of the heart or lungs. In most cases of nervous asthma, the attack is not attended or followed by bronchial catarrh. In others the dry râles ultimately give way to moist ones, and the attack terminates in free expectoration as the spasm subsides. Careful physical exploration of the chest, either during or after an attack, fails in typical cases to reveal any organic alteration of the lung structure. The percussion note is everywhere resonant; respiratory sounds are faint or wholly obscured by sibilant râles. The condition is one of temporary distension of the lungs with air. In cases of long standing, this temporary dilatation of the air vesicles passes into a chronic vesicular emphysema. Asthmatic attacks appear in most sufferers to be occasioned by external agents which irritate the bronchial mucous membrane. In some the spasm is induced by internal causes, as, for example, a nasal polypus or an undigested meal. Other patients, again, are extremely sensitive to certain climatic or atmospheric conditions. Indeed, this last appears to be the case with all asthmatics. As a rule, each patient is a law unto himself, and the idiosyncrasies of these victims are as diverse as amusing. We know of one gentleman who is so sensitive to the dust of feathers that, as he says, he feels like kicking every goose he sees.

Evidently, then, the asthmatic attack is reflex in its origin. But what is the real explanation of its phenomena, or, in other words, what is its pathogenesis? This is a subject of much discussion, particularly among the Germans, who, as Von Ziemssen, of Munich, once remarked, are never happier than when they are pulling down some one else's pet theory.

As the means of differentiating intra-thoracic disease grew apace, after the discovery of auscultation, clinical observers soon discovered that many forms of dyspnœa, which had been classified by older medical writers under the head of asthma, were but examples of dyspnœa due to heart or lung disease. Hence the existence of an independent or idiopathic asthma became doubtful in the minds of many, and was at length denied altogether by Rostan, Louis and others. They contended that the asthma was the result of bronchial catarrh, emphysema, etc. Other able observers, however, took up the cudgels in defense of the old theory, that a spasmodic constriction of the smaller bronchi is the cause of the asthmatic attack. Experiments were not wanting to sustain this view. Williams, and after him Bert, demonstrated that irritation of terminal filaments of the vagus produced contraction of the bronchioles.

This theory, which is an old one, is now the one most generally accepted. English and American authors adopt this explanation quite generally. Not so with our Teutonic confrères. They have waged a fierce, if not bloody battle upon this subject. Three other theories have been advanced and ably defended. The most notable is that of Wintrich, supported by Bamberger and Lehmann. These authors base their conclusions upon clinical observation and physical diagnosis rather than post-mortem appearances and experimentation, which they declare give negative results. They maintain that the impediment to free expiration in asthma is due to a tonic contraction of the diaphragm. Physical examination during an attack discloses a marked and permanent descent of the diaphragm, with evident distension of the lungs by air. If bronchial spasm exist at all, it must be secondary, as is the contraction of the respiratory muscles. Were bronchial constriction primary, there would be a collapse rather than a dilatation of the lungs. Against this theory Biermer contends most strenuously, and asserts that, in consequence of the distension of the alveoli and terminal bronchioles with air, by reason of the bronchial spasm higher up, the diaphragm is forced downward. Instead of this muscle remaining fixed and immovable, he has de-

tected slight and ineffectual movements of the diaphragm as it struggled to ascend against the cushion of air above. The possibility of spasmodic stricture of the bronchi through contraction of muscular filaments, which Reissеissen demonstrated in the walls of the air tubes, Biermer regards as settled indubitably by the investigations of Bert. An intermediate ground is occupied by Lebert, who finds an explanation for asthma in a reflex spasm of first the bronchioles and then the diaphragm, and perhaps other expiratory muscles.

In marked contrast to the foregoing is the view of Weber, according to whom the asthmatic attack is the result of vaso-motor disturbance. In other words, owing to irritation of the bronchial mucous membrane, a dilatation or paresis of the blood-vessels takes place, producing a fluxionary hyperæmia. This obstructs the lumen of the tube and hinders the free escape of air. Later on this condition subsides, a copious secretion ensues, and constitutes bronchial catarrh with expectoration. This theory is advocated in the main by Störck.

Finally, Leyden, now of Berlin, announced his discovery in the sputa of asthmatic patients of minute octahedral crystals imbedded in a mass of granularly degenerated cells. He supposes these sharp crystals so irritate the terminal filaments of the vagus within the air tube as to ultimately lead to spasm of the bronchial muscles. Such are the various theories offered in explanation of the pathogenesis of bronchial asthma. Spastic contraction of the bronchial muscular fibres is the most generally accepted, and is supported by the weightiest evidence.

KISSING FROM A MEDICAL STAND-POINT.

A correspondent in our valued contemporary *Babyhood*, of September, 1885, justly condemns the custom, quite usual with some mothers, of compelling children to kiss people promiscuously. The sensibilities of children are very acute, and it is not surprising that they should often strenuously object to promiscuous osculatory exercises. It is enough to make even a young child lose all faith in human nature to be compelled to kiss some people. And apart from the physical objections to the habit there are moral objections to it. If the child objects it is a species of cruelty to compel it to kiss; and if it does not object, it may become so wedded to the habit as possibly to entail serious, moral or physical consequences in after life.

We say "physical consequences" with good reason; for besides such a sore accident as rupture of the membrana tympani, which has resulted from a kiss on the ear, loathsome and deadly diseases may be communicated by kissing. Any one of the contagious or infectious diseases may be so communicated, and there are certainly numerous cases on record in which diphtheria and scarlatina have been traced very directly to a kiss. How is a mother to know but that the person who kisses her child has some specific affection, that there are specific buccal lesions, which may be the direct cause of a life-time of misery to her child, or an early and horrible death. From her stand-point, therefore, that compulsory kissing is disagreable to the child, the correspondent of *Babyhood* is in the right, but, as we have shown, it is doubly wrong, in that it may, after the disagreable act is finished and perhaps forgotten, entail the most serious consequences.

CHOLERA EPIDEMIC.—The epidemic which has been prevailing so severely in Spain, is now gradually abating, with a good prospect that during this season it will not extend over Europe, or materially beyond its present limits.

SOCIETY PROCEEDINGS.

AMERICAN DERMATOLOGICAL ASSOCIATION.

(*Concluded from page 306.*)

FRIDAY, AUGUST 28—THIRD DAY.

DR. C. HEITZMAN made some

REMARKS ON ELECTROLYSIS AND OTHER PRACTICAL TOPICS.

He spoke very highly of electrolytic epilation. For this pupose he uses the Leclanche battery. Six cells of this battery has the advantage of steadiness, lack of pain and lack of reaction when applied to the face of the patient. He employs a needle devised by Leiter, of Vienna, which permits the depth to which the needle penetrates to be measured. He has had good results from electrolytic destruction of dilated blood vessels in the face, less satisfactory results in the treatment of port wine marks, where a permanent cure is only exceptionable attainable. Sodium æthyl is highly recommended by some, for the destruction of angioma of the face, but it is in no way superior to nitric acid.

The speaker maintained, after observing two hundred cases of falling of the hair, caused by seborrhœa, that the method he recommended in 1876, gave fair results. This is the application of a ten or twenty per cent. ointment of crude oleum rusci in vaseline and parrafine.

For the removal of freckles, the Doctor used an ointment recommended to him by Wertheim, of Vienna. The preparation is as follows:

℞

Hydrarg. ammon. muriat., grm.,	3.75
Magist. bismuthi., grm.,	3.5
Ungt. glycerina, grm.,	30.0

M

This is to be applied in a thin layer every other night, and in four or six weeks, the result is highly satisfactory. As to the permanency of the cure the Doctor was unable to state.

In regard to the reappearance of hair after removal by electrolysis, the speaker considered it to be due to the growth of the fine hairs, which was increased by the transferrence to them of the nutrition, which should have gone to the hairs removed.

Dr. Hyde remarked, that Heitzman had touched upon the important point in the removal of hair by electrolysis. The question is not what will the result be at present, but what will it be in the future? The electrolysis produces a hyperæmia which tends to stimulate the growth of the remaining hair. He had found the rectified oleum rusci very valuable, and asked what is the test of the crude oil?

Dr. Fox said that in the treatment of angioma he had used nitric acid, making the application in the form of small dots, one-fourth to half an inch apart, with great advantage. In one case in which a nevus occupied half the body, he used this treatment with much success. In regard to the return of the hair after electrolysis: If the needle is carefully inserted and gentle traction is made on the hair, that hair will not return. In some cases there is a constant increase in the downy hairs from some cause, but these are exceptional cases. He did not think that the removal of hairs increases the growth of others. In one case, that of a young woman with a strong beard, he removed by actual count, eight thousand hairs. This process required two or three years. Since then it has been necessary to remove only a few dozen hairs.

Dr. Robinson had employed a similar ointment for the removal of freckles, but its effect was only temporary. He thought the growth of the remaining hairs was increased by the removal of a portion.

Dr. Wigglesworth said, that for the past fifteen years he had used the following ointment, which was almost identical with that mentioned by Dr. Heitzman:

℞

Hydrarg. ammon.,	parts 10
Bismuthi subnitratis,	" 10
Vaseline,	" 100

M

Dr. Duhring considered the oil of rusci valuable in seborrhœa of the scalp. The objection to it is its disagreeable odor. He had also used in chronic seborrhœa of the scalp, a preparation of sulphur, but did not consider it as efficacious as tar.

Dr. Hardaway had performed the operation of electrolysis for ten or twelve years, probably longer than any other member of the Association. He used the irido-platinium needle, which has the advantage of being bent, and it is not likely to pass through the follicle wall. The moment the follicle is entered, there is an escape of sebum. One case, that of a woman with a heavy black beard, has been entirely relieved. Electrolysis with a fine needle, affords a method of getting rid of freckles. The plan is to dot the needle over the surface covered by the freckle.

Dr. Heitzman said that the percentage of recurring hairs, is greater in some situations than in others. In the submaxillary region, it is greatest. The oil of rusci crudum is better than the rectified oil. To test it, add alcohol to a small portion of the oil and paint it on the skin. If it drys quickly leaving a black mark, it is the crude oil.

Dr. R. W. Taylor, of New York, read a paper on

SYPHILITIC RE-INFECTION.

He first referred to the literature of the subject and gave a brief review of the authentic cases on record, giving the names of the reporters. The number of cases previously reported is between thirty and forty. To these the speaker added the histories of three more. A fourth case has been observed by him, but as the complete history was not prepared, it was not given.

Case 1.—A bar keeper, aged 25 years, was first seen in 1868, suffering with gonorrhœa. Three years previously had had indolent enlargement of the lymphatic glands in the groins. Examination showed the presence of lymphatic enlargement in certain regions. Inquiry into the history, showed the existence of a chancre three years before, which had been slow in healing. About two months later, he became sick, and suffered with a roseolous eruption, sore throat, falling of the hair, and rheumatic pains, worse at night. Under treatment he improved, but afterwards exhibited a papular eruption. He was then seen by Dr. Van Buren who pronounced the case one of syphilis, and ordered mercurial treatment. He recovered after two years, but of his own accord, continued the treatment two years longer. He then remained well until the attack of gonorrhœa.

In February, 1870, he again appeared, presenting a typical indurated chancre on the cutaneous aspect of the pubes. It presented every evidence of a primary infection. Later a papular syphilide appeared over the body. There were several mucous patches on the pillars of the fauces, and the throat was red and swollen. The joints soon became the seat of nocturnal pains. The patient also presented a form of syphilitic epididymitis. Under mercurial treatment, there was some improvement, but a year later there were some tertiary manifestations. By 1874, he seemed very well. During the next three years, there were no evidences of syphilis, but he continued the mixed treatment.

He was again seen in the fall of 1882, when it was learned that his good health had continued and that he was the father of a healthy child. The child was examined and no evidence of hereditary syphilis, detected.

Case 2.—Had in June, 1873, a typical indurated chancre, followed by distinct secondary symptoms, which disappeared under treatment. He then passed from observation. In February, 1874, he presented several ulcero-tubercular lesions on the outer aspect of the forearm. He then remained under treatment six months. In January, 1875, he had spots of thickening of the periosteum of both tibia. He was again

treated with benefit. In June, 1876, there was a typical indurated nodule on the prepuce, from which extended indurated lymphatics passing to the inguinal lymphatic glands. The incubation of this sore had been about twenty days. This was followed by malaise, sore throat, swelling of the post-cervical and epitrochlear glands. Over the body and arms there was a fine mottling of light pink color. The patient then went to Europe, and was not seen again till March, 1885, when it was learned that the symptoms had been well marked, and that he had been treated for them by several Continental physicians.

Case 3, aged 41, had had a typical indurated chancre in 1874. There had been inguinal adenitis, followed by roseola, falling of the hair, and later by severe iritis of the right side. He was treated with mercury. In February, 1882, he returned with a typical hard chancre. In April, he became sick, had rheumatic pains and a mixed eruption of erythematous and papular syphilide. In May, inflammation of the iris of the right eye again appeared. In 1883, he had a late secondary rash.

These cases were reported with the object of throwing some light upon the natural history of second infections of syphilis. In all these cases, relapsing indurations were carefully excluded.

DR. HYDE had seen but two cases of reinfection of syphilis, where he was perfectly sure of the fact.

DR. H. W. STELWAGON, of Philadelphia, made some

OBSERVATIONS ON THE OLEATES.

In regard to the chemistry and preparation of the various oleates, both as to their manufacture by the direct combination of the acid with the base, and by double decomposition, almost, if not entirely as much can be found in the English translation of Gmelin's "Handbook of Chemistry," published in 1866, as in the writings of the past several years..

Of all the oleates, those of mercury, zinc, bismuth and lead have a place in the treatment of diseases of the skin, and in view of their costliness, the seeming unavoidable frequency of badly made preparations, the disagreeable oleic acid odor, and the irritation so frequently observed following their use, it is probable that of these four, the mercuric oleate is the only one that promises to retain a permanent value. This last is especially valuable in ringworm of the scalp, but for inunctions in the treatment of syphilis, it is of doubtful utility, as it is questionable whether it is absorbed. Oleate of copper, which has been so highly recommended for ringworm of the scalp, is not comparable in that affection to oleate of mercury, or to tar and sulphur preparations.

DR. TILDEN agrees with Dr. Stelwagon, that oleates are not useful as ointments.

DR. WIGGLESWORTH had practically renounced all oleates except the oleates of zinc, lead and mercury, as parasiticides.

DR. DUHRING said that his experience with these preparations was in accord with that of the reader of the paper. He had employed the oleate of copper in varying strengths in thirty or forty cases of ringworm, but it seemed to exert no influence whatever. These were, however, obstinate cases. Other methods of treatment were afterwards tried, and they were finally cured. As to its efficiency in acute forms of ringworm, he was not prepared to speak.

DR. HEITZMAN had tried the oleate of copper in chronic cases of ringworm, without any result, but in the acute cases, it cures after a time. It is not as efficient, however, as the preparation recommended by Dr. Taylor, that is, four grains of bichloride of mercury to the ounce of tincture of myrrh.

DR. FOX said it had been claimed that the oleic acid and animal oils are better absorbed than vaseline and other preparations. As a matter of experience, he had found that vaseline makes a better base for the majority of ointments than do the animal oils. Vaseline is a most soothing application to the skin.

DR. HARDAWAY had almost entirely discarded the oleates. In some recent cases, the oleate of copper has seemed to be successful, but in chronic cases it entirely failed.

DR. L. N. DENSLOW then reported

A CASE OF SYPHILITIC APHASIA AND PARAPLEGIA, FOLLOWED BY DEATH, WITH AN ACCOUNT OF THE AUTOPSY.

The object of the paper was simply to put on record a case in which an autopsy was obtained in early syphilitic cephalalgia. The patient was seen in consultation April 29, 1885. Two months previously, the patient had begun to suffer with severe headache, worse at night. There was also a papular eruption. He acknowledged the existence of a sore six months previously. Iodide of potassium with chloral had been given; two weeks later, the patient was free from pain, but it returned one month afterwards, when the patient stopped taking medicine. Iodide of potassium was again given, with the effect of relieving the pain. Aphasia and paraplegia then developed, and the patient died four days later, and within nine months of the initial lesion.

At the autopsy, the dura mater along the longitudinal sinus was thickened and adherent. There were numerous small gummata in the pia mater, situated along the right border of the longitudinal sinus and extended back to the fissure of Sylvius. The pia mater exhibited the evidences of simple acute inflammation.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, Thursday, September 3d, 1885.

THE PRESIDENT, B. F. BAER, M. D., IN THE CHAIR.

DR. B. F. BAER read the following report of a case of

OVARIAN CYSTOMA, COMPLICATED WITH PERITONITIS AND PHLEGMASIA ALBA DOLENS. DOUBLE OVARIOTOMY.

Mrs. M., æt. 31, has been a widow nine years. She had one child ten years ago, and had enjoyed good health until about three years before I saw her.

At that time she observed that her abdomen was increasing in size. This gradually progressed for eighteen months, when she was large enough to attract the attention of her neighbors. After this the growth remained almost stationary and did not affect her general health until the latter part of March of the present year, when she was suddenly seized with pain in the left iliac region. The pain was acute and radiating in character, extending principally down the anterior portion of the left thigh. She attributed the attack to an unusual exertion. Although she made an effort to continue her avocation—that of seampstress—she was compelled to give up and send for her physician, Dr. John R. Haney, of Camden. When Dr. Haney first saw her, her abdomen was very tender over its entire surface, purple from congestion, greatly distended, and tympanitic in its upper but dull in its lower portion. She was suffering great pain and had constant nausea and vomiting; her skin was hot, pulse 120, and temperature 103°. From the history, symptoms, and physical signs elicited, the doctor diagnosticated ovarian cystoma, with supervening peritonitis. He administered quinia per rectum and morphia hypodermatically, together with counter irritation over the abdomen. Within a week the patient appeared to be better, when, through the kindness of Dr. Haney, I first saw her. The tympanites had disappeared and the pain was not so severe, but the abdomen was still very tender on pressure, especially in the left iliac and right umbilical regions; her features were drawn and flushed, and presented an anxious expression; her tongue was dry and heavily coated, pulse quick, and temperature 102°. She lay quietly in the dorsal position, with her thighs flexed. The abdomen was as large as at full term of gestation, and was projecting. It was dull on percussion everywhere except along the line of the colon, and in the epigastrium, and there was evident fluctuation. The uterus was retroverted, not freely mobile, and very tender on pressure on the left side. Above and upon it could be felt the lower border of the circumscribed growth which occupied the abdominal cavity. I fully agreed with Dr. Haney's diagnosis of ovarian cyst complicated by peritonitis. As she seemed to be somewhat better, I advised a continuance of the treatment as previously pursued, with the hope of obviating the necessity of ovariotomy during the unfavorable condition in which she then was. The peritonitis continued to improve slowly, but a new trouble presented itself in a very painful swelling of the left lower extremity. This continued until the limb was greatly increased in size. Its temperature was much higher than that of its fellow, which seemed to be in a normal condition. She now required large doses of morphia to relieve her pain, and she was losing flesh and strength. She still had nausea and took almost no nourishment. Her temperature and pulse had again risen to almost the highest point noted. Both she and her friends were willing and anxious that we should do sometеing more radical than simply to wait for a more favorable condition for operating, if we deemed it proper. I believed from the symptoms and physical signs, that the inflammatory action was external to the cyst and not within it, and for that reason decided to wait for a subsidence of the acute symptoms which I rather confidently expected. At the same time I held myself in readiness to operate at once, should the patient not improve or grow worse. The next day she showed signs of slight improvement. Treatment both local and general continued. The acute symptoms gradually subsided to those of a sub-acute condition. The temperature had decreased to 101°, pulse 100, but weak. She was still unable to retain food, and was extremely weak. I advised further delay; but she did not improve much after this, her temperature and pulse remaining about the same as that noted above. Her stomach had regained its power to a slight degree to retain and digest liquid food. She had now been confined to her bed more than two months, and her left leg was powerless. There had not been the slightest improvement during the two previous weeks. We therefore decided to remove the tumor.

Operation.—June 19th, 1885, assisted by Drs. J. K. Haney, W. A. Davis, and H. M. Christian, and in the presence of a section of the class from the Polyclinic, I made an incision three inches in length down to the peritoneum, and then checked the hæmorrhage with clamp forceps. I next very carefully incised the peritoneum and found, as I had expected, that it was closely united to the cyst wall. These adhesions of cyst to peritoneum were universal, and required careful and patient manipulation to separate them. The parts were exceedingly vascular and hæmorrhage was profuse. After separating it as far as possible I tapped the cyst and allowed the contents, which were semi-liquid and chocolate colored, to drain away. I next closed the puncture made by the trocar, and then completed the separation of the cyst from its adhesions and removed it. As there was a very general and free oozing of blood from the broken vessels, I introduced a number of large flat sponges and spread them over the bleeding surfaces. An assistant now made firm pressure upon the external surface of the abdominal walls, whilst I ligated the pedicle and removed the tumor. The cyst developed in the left ovary and the pedicle was slender, not unusually vascular, and of good length. The right ovary was diseased, contained a number of small cysts, and was double the normal size. I removed it also. Examination now showed that the hæmorrhage had almost ceased, but there were still a number of points from which blood flowed. The peritoneum was intensely injected, and I disliked very much to pick up bleeding points for fear of making the hæmorrhage worse. I therefore reapplied a large flat sponge, and had firm pressure again made from without whilst I proceeded to place the sutures for the closure of the incision. I then removed the sponge and found very little blood upon it. I replaced it by a long, narrow strip of sponge which I allowed to project from the lower angle of the wound, and then again cleansed Douglas's cul-de-sac and other dependent portions of the peritoneal cavity, after which I quickly tied the sutures from above downwards, removing the long sponge through the lower angle of the wound before I had encroach-

ed so closely upon it as to compress it in its removal. It was only slightly stained. I quickly applied the external dressing, making an unusual amount of pressure by cotton and bandage. The operation was finished, but the patient bore it badly. Her extremities were cold and purple, her face livid, and pulse very weak. Stimulants hypodermically and the application of external heat, which were begun during the operation, were continued after she was returned to bed. She remained in an almost collapsed state for many hours, but gradually reacted and the next morning was in a fair condition. Her temperature was lower than it had been for weeks, pulse 112, but weak, stomach quiet, no pain, no tympany. She had taken an occasional small piece of ice, but nothing else except the morphia since the operation.

June 21st. Temperature 102°, pulse 120. Slight pain and tenderness in left iliac region. She had been very weak and faint during the night, for which brandy had been administered in repeated small doses. The swelling and pain in the limb had diminished; she had not vomited since the operation, and felt hungry. Ordered a teaspoonful of milk every second hour.

June 22d. Comfortable and doing well. Temperature 99⅘°, pulse 90, and strong; slight metrostaxis; passed flatus per rectum. Milk increased to a tablespoonful and retained.

June 24th. Temperature 99°, pulse 85. General condition greatly improved, no pain, no tympany; examined wound and found it united throughout; removed sutures.

June 25th. Doing well, and is bright and cheerful. She took nearly a quart of milk during the last twenty-four hours, and digested it.

June 30th. She has been gradually improving. Temperature normal, pulse 95. Bowels moved today. She is taking solid food, and expresses herself as feeling quite well. Limb improving. She can now move it.

July 12th. Sat up to-day for the first time, the twenty-second day after the operation.

August 30th. A note received from Dr. Haney to-day informs me that Mrs. M. is going about attending to some of her duties, but that she has not yet regained her strength fully, and that her limb is still weak.

The recovery of the woman under the forlorn circumstances just narrated, is certainly a great triumph for our art; but the case serves a better purpose in forcibly illustrating the danger of deferring operative interference in ovarian cystoma, simply because the patient is comfortable, and suffering no inconvenience from the presence of the tumor. The subject of an ovarian tumor is in constant danger of injury from slight causes, which may produce such changes in the tumor, as to render what might have been a simple and safe operation, one of extreme hazard. This had been a simple, slow growing cyst, and had not markedly affected the health during its three years of existence; yet it suddenly became inflamed, and the patient narrowly escaped death as a result. The case furnishes a strong argument in favor of operation as soon as the disease is diagnosticated. Of course there are qualifications and each case must be decided on its own merits; but the rule that an ovarian tumor should be removed as soon as it is known to exist is the only safe one to follow.

As a striking contrast to the case just related, and to show the value of the principle enunciated, I will report the following case of

POLYCYSTIC OVARIAN TUMOR, DOUBLE OVARIOTOMY.

A. K. was sent to me August 5th, 1885. She was 19 years of age, single. Puberty was established at sixteen, and she had menstruated regularly until six months previously. She then without cause, so far as she knew, began to flow more freely at her periods and they continued longer. About the same time she noticed a small lump in the right iliac region. This increased in size so that soon the entire hypogastrium was distended, and when I first saw her she was as large as at the eighth month of gestation. Her face showed marked signs of emaciation and palor, and the drawn, anxious expression of ovarian cystic disease. She was then having a profuse metrorhagia every two weeks. She had not suffered any pain, and up to within a few weeks very little inconvenience except from the frequent metrorhagia.

During the last month, however, her health had been failing, she had lost flesh, had a weak languid feeling, and suffered much from the weight of the growth. Physical examination in the dorsal position revealed a projecting slightly irregular abdomen, larger on the right side, dull on percussion over the entire anterior surface, but resonant along the line of the colon. Palpation showed imperfect fluctuation and several firm irregular masses within the abdominal cavity. The vagina was virginal, the cervix uteri was pointing forwards, the body of the uterus retroverted, the whole organ enlarged and soft. It was only slightly movable independently of the tumor. The sound gave a measurement of three inches. I diagnosticated polycystic disease of the right ovary, and advised immediate operation. Six days afterwards, on August 11th, she entered my private hospital, and on the 13th I operated with the assistance of Drs. H. M. Christian and J. N. Richards. I made an incision two and a half inches in length, and came upon the surface of the tumor, which presented the white glistening nacreous appearance, especially common to thick walled polycysts. Tapped with Hodge's trocar. The contents were so thick, that they flowed very slowly, and it was necessary to puncture several smaller cysts, which was done without removing the instrument. Even then the mass did not collapse much, because of a large number of young or child cysts. After closing the puncture, I enlarged the incision to three inches, but I had considerable difficulty in removing the tumor. It was necessary to make firm traction with rotatory movements whilst Dr. Christian exerted a counter force and pressure through the abdominal walls. Fully ten minutes were occupied in delivering the tumor after it was tapped, but I was rewarded with an incision that looked so small, that it seemed almost incredible that this large mass had passed through it. There had not been a single adhesion, but the pedicle was

short, thick and vascular. I tied it with Tait's Staffordshire knot, cut the tumor away and dropped the stump. The tissues of the left ovary were found to be entirely disorganized and degenerated into a cyst as large as a walnut. This I also removed. The uterus presented a very vascular appearance and was somewhat enlarged. After assuring myself that the peritoneal cavity was entirely free from any foreign matter, I closed the incision, dressed the wound, and returned the patient to bed. Temp. normal, pulse 96°, no pain, but as she felt a little sore and restless, ¼ grain of morphine was given hypodermically, small pieces of ice for thirst. 14th, 8 A. M., temp. 99°, pulse 84, had passed a good night. At 1 P. M., 26 hours after the operation, milk in teaspoonful doses was allowed, water when she desired it. 15th, metrostaxes began this morning. 18th, union complete, renewed sutures. Her recovery was uninterrupted. She sat up for a few minutes on the 11th day, and went home, eight miles in a carriage on the 18th day after the operation. To-day she sent a request to be permitted to go out, because she is feeling so well. Certainly nothing could have been gained by procrastination in this case.

DR. GOODELL congratulated Dr. Baer on the good results obtained in such a serious case as that first reported. Great care in the asepsis of these cases should be observed. In one of his cases of septicemia before the operation, after complete union had been secured, the stitches had been removed, and after the patient was up, an abscess was observed, forming in the line of union and was very persistent. Finally, after careful search, a ligature which had been tied around the pedicle of one of the ovarian cysts was found and removed. Subsequently the other appeared, and after its removal the abscess healed. He did not like to remove the stitches so early as Dr. Baer removed them; and he reminded Dr. Baer of a case in which he had assisted Dr. Goodell. The operation was performed on December 5th. Convalescence was rapid, and the patient was so impatient to be home on Christmas that she could not be restrained, and on the 19th day after the operation she took the cars for home. The train was derailed, and the jolting caused the cicatrix to open. The physician who was called in closed it immediately and the patient recovered. In another case a cough caused the wound to burst open and reveal the bowels after the stitches had been removed. This patient also recovered. For these reasons he never removed the patient before the eighth day and not until the bowels had been opened. He inquired of Dr. Baer his method of closing the opening in the cyst after it had been tapped preparatory to its removal from the abdominal cavity. Does he employ pressure forceps? What method of dressing the abdominal wound?

DR. BAER replied that he closes the cyst puncture with Well's clamp forceps when the cyst wall is strong enough. In some cases he stitches up the opening, or ties a string below it when the cyst walls are loose and soft. He closes the external wound, as he had been taught by Dr. Goodell, with silk sutures and dresses it with salicylated or absorbent cotton, adhesive strips to hold the cotton in place and take the strain off from the stitches, and over all a bandage. He removes the sutures on the fourth or fifth day in order to avoid the danger of pus forming in the suture tracks, as has sometimes occurred when he has allowed them to remain as long as eight days.

(*To be concluded.*)

FOREIGN CORRESPONDENCE.

LETTER FROM PARIS.

(FROM OUR OWN CORRESPONDENT.)

The Principles of Listerism—Experiments with Trichinosed Meat—Intra-Uterine Injections of Perchloride of Iron Solutions in Metrorrhagia—A Plaster Model of the Brain—Disposal of Débris of Cadavers.

In his opening address in the course of clinical surgery at the Necker Hospital, Professor Le Fort chose for his subject the principles of Listerism, or the modern system of antiseptic treatment in surgery, which he has just published under the title of "Les Pansements et la Mortalité." After examining in this essay the results of treatment of wounds and of the puerperal state from the earlier part of this century, he concludes that a large mortality used to be looked upon as inevitable, and supposed to be brought about by atmospheric influences, or by some agent whose nature was undefinable. The author believes that he was the first to indicate clearly that contagion was the sole cause of the difference of mortality in hospital and in private practice, and that consequently, surgical and other dressings ought to have for their object the destruction of germs which might be the starting-point of infection. Professor Lister's doctrine "applies only to recent wounds, and does not take into consideration contagion, but seeks to prevent suppuration in the destruction, by means of carbolic acid, of the fermentation-germs contained in the air."

Prof. Le Fort attributes the various infections to *contagion*, and he regards the agent of this contagion "as a contagion-germ of unknown nature (but possibly a special microbe), developing primarily, if not spontaneously, under various influences in a patient who has been subjected to operation, and which emphatically requires us to guard against carrying the active principle of contagion into a wound." He considers that the doctrine of M. Pasteur, so justified in its application to fermentation and putrefaction, applies to surgery, when it is used to explain alteration of normal or pathological liquids by contact with the air. The alteration of these liquids by the ferment changes can give rise to septic poisoning, but ferments cannot create morbid entities like pyæmia, erysipelas, typhoid fever, cholera, scarlatina, etc., which are characterized by a special contagion-germ transmissible in each case. While ridiculing the minutiæ of the Listerian principles and practice, he recognizes that the adoption of the Listerian antiseptic dressing has been attended with a notable reduction of mortality in hospitals, and that many

operations have been made much less dangerous. In fact, in trying to oppose the fermentation-germ, the dressing of Lister has opposed the contagion-germ. The good results thus obtained are, according to Le Fort, due to the principles he has himself adopted for a long time as a consequence of his belief in contagion-germs. Thus it may be seen that, while both these eminent surgeons have been working with the same materials, but on essentially different theories, they have arrived at the same satisfactory results. Prof. Le Fort, however, accords to Sir Joseph Lister the credit of having introduced into surgical practice his special mode of dressing, which has proved such a boon to wounded patients.

A great deal has been said and written on the deleterious influence of trichinosed meat used as food, but according to M. Duprez, Veterinary Inspector of the butchers' shops in Paris, this is not so great as has been claimed. In a note to the Biological Society of Paris, he gives an account of some experiments performed by him with trichinosed meat. Two series of rats were fed with American pork, containing trichinæ. One set of rats was fed daily with a mixture composed of 10 grammes of trichinosed pork, 20 grammes of bread and a little water; the second set got 15 grammes of the pork with a little water, but no bread. At the end of three weeks, no accident was observed, with the exception of a slight diarrhœa. Fragments of muscles taken from the animals in a living state, contained no trace whatever of trichinæ.

A great many gynecologists employ intra-uterine injections of solutions of the perchloride of iron in cases of metrorrhagia, which, it is true, might stop the hæmorrhage, but Dr. Sirédey, of the Lariboisière Hospital, absolutely condemns the practice for the following reasons: The perchloride of iron nearly always determines a violent inflammation in the parts with which it is in contact, extending even to sloughing. Dr. Sirédey, therefore, prefers to have recourse to the other means usually employed in such cases, such as the tamponment, subcutaneous injections of ergotine, when one is sure that it is not a case of threatening abortion. He also employs cauterizations of the mucous membrane of the uterus with the nitrate of silver melted on the extremity of the uterine caustic holder, which is much easier of application than the injections of the perchloride of iron. It rapidly stops the bleeding, without having any of the inconveniences of the iron, and may be employed in all cases of metrorrhagia which are not dependent on fibroma or cancer.

Dr. Luys has presented to the Paris Academy of Medicine a plaster model of a human brain made under his directions. It is nearly four times larger than the natural size, nevertheless, it is an exact reproduction of the human brain, being enlarged from an impression taken from nature. It is the first of its kind that has been made in France. There is a plaster model of a human brain at the Anthropological Society of Paris, made according to the directions of Broca, but which is the synthesis of different cerebral regions copied from different subjects.

Until recently, the *débris* of corpses used for dissections have been buried in the cemetery of Montparnasse only. A decree just published by the Prefect of the Seine authorizes them to be incinerated in a special apparatus established in the Père-la-Chaise, or to be buried in one of the other cemeteries of Paris.

A. B.

Paris, August 21, 1885.

DOMESTIC CORRESPONDENCE

THE INTERNATIONAL MEDICAL CONGRESS.

TO THE EDITOR OF THE JOURNAL:

Dear Sir.—In the discussion by various medical journals, of the propriety of the action of the American Medical Association in arranging for the meeting of the Medical Congress at Washington in 1887, much has been said, and with an evidently malicious animus on the part of some to discredit the action of the Association. They claim that in all instances the Congress has been convened only by the action of the *profession* of the country where it meets. A brief reference to *facts*, will perhaps place the position of the invitation clearly before your readers.

At the annual meeting of the American Medical Association held at Washington, May 6, 1884, "at which there were more than 1,200 regularly registered members (of the profession) present,"[1] Dr. Austin Flint, President, in his official address, stated the origin of the Association and the objects for which it was formed in 1847; these being for "the protection of their interests; for the maintenance of their honor and respectability; for the advancement of their knowledge and the extension of their usefulness; for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those who were engaged in it." He fully showed how, during thirty-eight years, these objects had been faithfully carried out, to the great benefit of medical men. He then subsequently said: "Our Association, both by precept and example, has aimed to facilitate and foster friendly intercourse between those engaged in the practice of medicine, and these should not be limited to our own country. As the means of union for these objects of the medical *profession* of all countries, the International Medical Congress claims a warm interest, and it would prove, as I doubt not, a source of great gratification to the *profession* of our country, if the meeting of the Congress in 1887 were to be held in the United States, and I suggest the propriety of action to be taken *now*, with reference to this desirable end. *Inasmuch as the invitation should be in behalf of the profession of the whole country and not of any particular section, it appropriately should come from the American Medical Association.*[2] If the suggestion be favorably received, it seems to me advisable that a Committee be appointed *with instructions* to carry an invitation *from this Association*, through *its* delegates, to the Congress at Copenhagen. The Committee may also be empow-

[1] Journ. Am. Med. Assoc., May 17, 1884, p. 550.
[2] The italics are mine.

ered to designate the time and place of meeting of the Congress in 1887, and to take such other preliminary steps as may appear to the Committee to be requisite. My suggestion in regard to the International Congress is not made solely on my own responsibility; but at the instance *of several, well known for their active interest in the welfare of the American medical profession.*" The only one of these specially named was the late Professor Samuel D. Gross. The origin of the invitation is thus clearly established; it was an invitation by 1,200 members of the medical profession in the United States, through a committee of delegates from the American Medical Association, to the Congress at Copenhagen.

I have no wish to discuss the action of the Committee subsequently appointed as "delegates to the Congress," with a special object. Their sole status in the Congress arose from the authority given them by *the Association.* By all parliamentary law, as well as courtesy to those who entrusted them with their mission, their duty was to report their action to the next meeting of the Association at New Orleans. When the Association accepted their report, they were *ipso facto* discharged, and further action on the subject rested with the Association. The action taken at New Orleans by the Association was correct in parliamentary law and approved by high parliamentary authority. The subsequent action of the Committee to whom the subject *was recommitted,* can only be correctly known when its official report is made at St. Louis, and all discussion of their action now is improper, because based on rumor and not on facts. The Association alone can give a value to the acts of the Committee by accepting their report.

AN OLD MEMBER OF THE MEDICAL PROFESSION.
Philadelphia, Sept. 9, 1885.

BOOK REVIEWS.

A PRACTICAL TREATISE ON DISEASES OF THE KIDNEYS, AND URINARY DERANGEMENTS. By CHARLES HENRY RALFE, M. A., M. D. (Cantab). Fellow of the Royal College of Physicians, London; Assistant Physician to the London Hospital. Formerly Senior Visiting Physician to the Seamen's Hospital, Greenwich, etc., etc. London: 8vo., pp. 572. H. K. Lewis & Co., 1885. Philadelphia: P. Blakiston, Son & Co.

The first chapter of this book deals with the general symptomatology of renal diseases, as manifested through derangements of the nervous, vascular, respiratory, digestive, cutaneous and urinary systems.

The second chapter is devoted to the clinical examination of the urine, which the author's ready clinical knowledge enables him to render extremely practical, and clear in detail. Something over a hundred pages are devoted to this very important subject.

The several forms of nephritis are next considered in detail. With regard to the nephritis of pregnancy; which heretofore has generally been considered as arising mostly during the last months of gestation, the author writes: "it would be more accurate, however, to state, that it is rarely met with before the end of the third month, and, that it hardly ever develops after the seventh month." With regard also to the generally accepted statement, that primiparæ are more liable to nephritis than women who have already born children, the author says: "this statement, however, requires modification, and it should rather be, that women who have not been the subject of nephritis in their first pregnancy, are less liable to the disease in subsequent pregnancies, and that the risk is diminished with successive pregnancies." These points it will be observed, are important as bearing on the cause of nephritis of pregnancy, which just now, is the subject of more or less dispute among authors. In the treatment of ordinary cases of acute nephritis, the author advises the avoidance of the more active eliminative measures, such as cathartics, diaphoretics, and diuretics; limiting these for the most part to cases attended with suppression of urine, and acute uræmia. In these last conditions also, absolute non-nitrogenous diet is advised for at least two days, after which, slight relaxation of this rigid dietetic requirement is permitted, if there is manifest improvement. The milk treatment, which has of late become revived, and perhaps we may say, is so justly popular, the author points out should not be employed in acute stages of nephritis, as in such conditions, he has even observed harmful results follow its use. In sub-acute, or chronic nephritis, however, he has found its employment often highly beneficial, fequently causing rapid disappearance of albuminuria, and other threatening symptoms.

Suppurative inflammations of the kidneys, pelves, ureters, and surrounding tissues, are next considered individually. Among these, of special interest will be found the section on Pyelo-Nephrosis, (surgical kidney) "catheter fever" of Sir Andrew Clark, or what is perhaps most appropriately termed by Dickinson, "uriseptic kidney." The author advises, when as is usually the case in this affection, the urine is ammoniacally putrescent, the internal administration of quinine, and boracic acid; "the latter having the advantage possessed by few other antiseptic remedies, of passing unchanged through the kidneys; it therefore acts upon the whole urinary tract." The author also suggests as a local measure, washing out the bladder with antiseptic solutions in such cases; while we believe that this fever is more often precipitated by the hyperæmia, consequent on reflex irritation produced by the introduction of instruments into the bladder; than by the actual introduction of septic matter in catheterizing, etc.; yet we agree with the author that after the mischief is once lighted up, "there is less risk in completely emptying the bladder, than in allowing foul urine to accumulate." In a recent case in point, we attribute its successful issue very largely to washing out the bladder twice daily with an antiseptic solution.

Degenerations, new growths, and parasites of the kidneys, constitute the subjects of the next three chapters.

Diabetes insipidus and mellitus are considered at length in chapter nine. In the medicinal treatment of diabetes mellitus, the author seems to rely more

largely upon opium. Vapor baths are highly commended also in these cases. Thus the author writes with regard to the latter, "It is strange that such an efficacious aid to our treatment, should have been persistently overlooked by recent English writers on the subject." The preparations of arsenic, including the bromide, which has attained some popularity of late in America, is not spoken of with much favor, save in cases complicated with malaria.

Stone and gravel are systematically considered in the succeeding chapter. The author holds that the nuclei of renal calculi, take their origin in the renal cells of the convoluted tubes, by retention within them of uric acid, oxalate of lime, or phosphate of lime "owing to some vital impairment of their (the cells) function," and that this is the origin of all urinary calculi, except those formed upon some foreign substance introduced from without into the bladder.

Functional albuminuria, peptonuria, and hæmoglobinuria, comprise an interesting chapter at the close of the work. Of late an impression has gained some belief, that albumin occurs quite often in the urine of perfectly healthy persons; indeed, some authors, notably Senator, claim that normal urine is always "feebly albuminous." Certain experiments of late conducted on a large scale, notably those of Capitan and Chateaubourg, would seem to show that albumin is present in the urine of a majority of healthy people. The author, however, does not believe in the existence of so-called physiological albuminuria. In his own experience, albumin has not been found in to exceed three per cent. of the cases met with in applications for life insurance. He points out that the discrepancy between the results obtained by different observers is probably due to the use of imperfectly corrected tests. Thus, the experiments of Capitan and Chateaubourg were conducted by means of the potassio mercuric iodide test, which, the author correctly says, precipitates many other bodies besides albumin. Thus, in the case of 94 soldiers experimented upon by Chateaubourg, the above test "gave a precipitate with 76 urines, whilst heat only once proved the presence of albumin."

The occasional appearance of albumin in the urine of those whose kidneys are not organically damaged, the author concedes; and discusses these under such causes as derangements of digestion, disturbed innervation, altered conditions of the blood, etc., etc. An appendix is added, containing rules for quantitative analysis for urea, hippuric acid, phosphoric acid, sulphuric acid, hydrochloric acid, albumin, and sugar in the urine, and also one containing a diet list for diabetics.

It will thus be noted that the scope of the work is quite extensive, including practically all renal diseases, functional and organic; the language is clear and concise; the text unincumbered by theoretical discussions; while the whole matter is thoroughly up with present knowledge on the subject; admirably adapting it for the use of students. Footnotes are entirely dispensed with, references being inserted in their appropriate places in the text in parenthesis; and we should be glad to see this excellent example more generally followed, especially in text-books.

The author is already favorably known in America as the writer of a work on "Clinical Chemistry," and also one on "Morbid Conditions of the Urine Depending on Derangements of Digestion," and the present volume more than sustains the high reputation gained by its predecessors. We congratulate Dr. Ralfe on having written one of the best text-books on renal diseases to date, if, indeed, not the best.

MISCELLANEOUS.

NEW YORK STATE MEDICAL ASSOCIATION—FIFTH DISTRICT BRANCH.—The first *annual* meeting of the Fifth District Branch will be held in Brooklyn, on Tuesday, October 13th, 1885. There will be a morning and afternoon session.

All Fellows desiring to contribute to the meeting, either by reading papers, notes or communications, or by exhibiting specimens, are respectfully invited to notify the Secretary, E. H. Squib, M. D., 36 Doughty Street, Brooklyn, to that effect at their earliest convenience.

REVACCINATION IN GERMANY.—The commission appointed by the German Government last fall on the subject of vaccination and its effects as a preventive of small-pox, report that since 1874, when revaccination was strictly enforced (it had been partially in vogue for some years before), not one death has occurred in the German army, while in those of Austria and France, where revaccination is not enforced, and where the soldiers mix with a population but imperfectly vaccinated, the mortality has been high, ranging from ten to twenty-five per hundred thousand in the Austrian, and from seventeen to twenty-nine in the French. Comparison of the ravages of the disease in the large cities of Europe was also made, in all cases the results being largely in favor of Germany. These facts are held to show that revaccination confers almost complete immunity from small-pox, and justify the enforcement of the ordinance by the German health authorities.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM SEPTEMBER 5, 1885, TO SEPTEMBER 11, 1885.

McKee, J. C., Major and Surgeon, sick leave still further extended three months, on surgeon's certificate of disability. (S. O. 204, A. G. O., Sept. 7, 1885.)

Patzki, J. H., Capt. and Asst. Surgeon, assigned to duty as post surgeon, Jackson Barracks, New Orleans, La. (S. O. 192, Dept. of the East, Sept. 8, 1885.)

Kane, Jno. J., upon expiration of his present leave of absence to be relieved from duty at Willet's Point, N. Y. H., and to report to the commanding general Dept. of Texas for assignment to duty. (S. O. 201, A. G. O., Sept. 3, 1885.)

Richards, Chas., Capt. and Asst. Surgeon, to be relieved from duty in Dept. of the East, and to report to the commanding officer, Willet's Point, N. Y., for duty at that station. (S. O. 201, C. S., A. G. O.

Polhemus, A. S., First Lieutenant and Asst. Surgeon, when relieved at Ft. McDermit, Nev., assigned to temporary duty at Presidio of San Francisco, Cal. (S. O. 87, C. S., Dept. of California.)

Kendall, Wm. P., First Lieutenant and Asst. Surgeon, relieved from duty at Presidio of San Francisco, Cal., and assigned to duty as post surgeon at Ft. McDermit, Nev., relieving Asst. Surgeon Polhemus. S. O. 87, Dept. of Calif., Aug. 31, 1885.)